A Treatise on Obstinate Hiccuph

by

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I intend to fully discuss this subject, taking up its physiology, pathology, anatomy and treatment.

I propose first to give my own interesting case, then to give the opinions of many dozen of physicians culled from British medical journals and books and also from foreign medical literature.

After that I propose to briefly discuss the opinions of these various authorities, and at the end working out which are in my opinion correct, and which will fall in with the views I hold in connection with my own case.

Hundreds of our best physicians lived their lives through without having met an example of obstinate hiccup, and rare must be the case in which a second or third case is observed by the same man.

Persistent and obstinate hiccup is well worth a study, for to stand day after day, and week after week beside an intractable case as I have done, and to be able to render so little help is a reproach. It must be regarded less in the light of a monstrosity and curiosity of medicine, and as in my case, when it was the single symptom, the essential disease itself, one had to tackle it seriously, and not look upon it as a passing trivial matter.
The word himself expresses the trouble.

St疯临 describes hiccup as a sudden spasmodic descent of the diaphragm accompanied by a spasmodic closure of the glottis, the characteristic rise being caused by the incoming column of air striking against the partially closed glottis. The assumption of a spasmodic closure of the glottis in hiccup seems scarcely warranted. Normally the descent of the diaphragm in each respiratory act is accompanied by a contraction of the posterior crico-arytenoid cartilages and a dilation of the glottic aperture. The diaphragmatic and the laryngeal acts keep time together and in health the rhythm of sixteen or eight to the minute is maintained. If however the diaphragm gives a sudden descending jerk irrespective of any respiratory need as is the case in hiccup, and this jerk occurs at a time when the dilatation of the glottis is not acting a
noise will be produced by the rush of air through the insufficiently widened glottic aperture. It seems certainly possible to account for the noise of the hiccup by the mere fact of the descent of the diaphragm occurring when the glottis is not properly closed. The noise is not a constant phenomenon, and during an attack of hiccup it never occurs during ordinary inspiration or without the spasmodic action of the diaphragm, although the latter phenomenon may occur without the former.

The older views of a conclusion of the stomach, or that of M. Nahon, a conclusion motion of the esophagus drawing the stomach and diaphragm upwards, have been long discarded as erroneous. Hiccup is shortlly a reflex spasm of the diaphragm with subsequent closure of the glottis.
Mr. B. B. Age 44.3

History of patient

Hereditary tendencies

Family history fairly good. Father and mother alive aged 70 and 75. Two brothers one sister all alive and healthy. Grandparents on both sides lived to an old age. Mother had one sister who died of consumption. Mr. B. is a merchant.

Habits as to food and drink

Has always had a good appetite and been from youth a most abstemious man.

General surroundings at home and at work

Has lived in a healthy open part of a London suburb. Mr. B. although a workman has never allowed himself to be indoors too much and has always been very keen on fresh air.

Previous illnesses and accidents

17 years ago had an attack of jaundice, that is to say, when he was 26 years old, was ill at that time for three weeks. Was married a few months after that illness and continued in good health until Autumn 1896. His continuing in good health meant that he was never really ill—never had to lie up. During all these years though he suffered from a stomach easily upset, and if anything ever disagreed with him he would be sure to vomit in an hour or two getting relief from so doing and feeling quite well.
after he had rid himself of the contents of his stomach.

During all these 17 years too he was very now and again would get out of his bed in the middle of the night or in the early morning, he sick and turn in again feeling relieved and well and able to eat a large breakfast after.

Sometimes two or three months would pass without him being sick, and then again perhaps for weeks he would be sick as described above two or three times a week; but so little had it interfered with his general health that he never sought advice as to the cause - nor did his wife (a most devoted nurse to him) look upon his sickness as anything else than a matter of course. The sickness he suffered from was very like that of an alcoholic. I may say that for the last 14 years he has been one might say continually under medical treatment. Every medical man has suspected his sickness to be alcoholic, and looked upon his non-confession of alcoholism with doubt. There is no trace of whatever of alcoholism in the history. I have taken care to get behind the scenes in many ways and I can vouch my accuracy.

In the autumn 1896 Mr. B. while feeling quite well one morning coughed suddenly and found some blood in his mouth. The local doctor was called in, and although he did not have any severe return on the advice of two specialists he was sent off to Bavooplatz with his right apex affected, a cough, a good deal of expectoration and some tumbrel bacilli in sputum. Mr. B. remained all winter 1896 in Bavooplatz and did splendidly. Cough lessened, sputum ceased and tumbrel bacilli decreased.
He kept well all summer 1897 in England and again spent the winter of 1898 in Davosplatz, and was looked upon then as the model patient, as he himself left no stone unturned to get better, and followed out every instruction to the letter. In fact his entire life was given up to his recovery. Mr K. only once during his stay in Davosplatz had any serious symptoms. I have ascertained from his medical man there that he once alarmed him by suddenly developing full symptoms of some meningitic trouble, but these as quickly passed off, but Mr Huggard vouches for the accuracy of his diagnosis and always suspected some brain lesion in the background. He returned to England in the spring of 1899 cured - no tubercle bacilli, cough very little, but always some expectoration, and Mr K. always carried a receptacle in his pocket for his phlegm. He wintered here in Halmouth the end of 1899 and beginning of 1900 and did very well. Every fine day he was out on the water and always took a good deal of exercise besides. The London man passed him as sound before he came here, and I was unable at any time to detect any lung trouble.

Time and mode of origin and course of present illness

Mr K. after keeping well here all winter consulted me in March 1900. He was suffering from all the symptoms of dyspepsia and torpid liver. He was not in bed for more than a few days and never had any temperature or pulse. In fact at no time was I at the least anxious about him. His tongue took a long time to clean and his stools continued clay - longer than they should have done. I put down this attack to his having lived so long near the sea, as I
have often found that people who winter in one of these hotels on the sea are apt to get some slight stomach disorder about it or 6 months which instantly goes away with a change of air. Mr. B. left here in April comparatively speaking well. At least he was out of the doctor's hands. Looking back now one can see that this however was the commencement of his breaking up. He returned to London, made preparations for selling his business here and coming down here to live as he was so much taken with the place. All this summer he has thus had a lot of worry and has often felt very low and depressed—had fits of crying too, but as he told me his worries were not enough to account for this hysterical state as all his arrangements were going on satisfactorily and he was looking forward to coming down here and living quietly free from a bustling life. A month before Mr. B. came here he had a stomach attack, headache, etc., and called his local man in. He also saw before he came down here the two specialists who had sent him to Davos Platz and he was passed as sound. In consulting one of them about his stomach he was given an ordinary stomach mixture and some alpin pills; and armed with these he came here to settle.

On October 20th Mr. B. consulted me and said he was suffering from flatulence—his motions were hard and that the stomach mixture did not agree with him. I changed it and at the end of a week's treatment he felt much better and was able to take walks to—in fact to lead
his usual life. On November 14th, while feeling well, he began to hicough, and on the 5th as he was still hicoughing he sent for me. I gave him a stomachic sedative and said I felt sure it would pass off. On the 7th (two days later) he was still hicoughing, but was quite well otherwise. Then I began to try drug after drug, and found that whenever Mr. B. was sick and could vomit his hicough stopped. Once it stopped two days, and again off and on for an hour or two hours. At first the hicough ceased entirely during his sleep, but latterly continued though modified in force and character. After vomiting there was always a resolation for a short time, but then he felt in himself worse—his head ached badly, and he was depressed. Whenever they began again his head got better and he felt in himself better, so much so that I used to tell him we were quite sure if they stopped. The hicough was a regular tossing—now and again there would be a doublethump and a sort of crow.

Mr. B. hicoughed from 14th November to the 6th, during which time I tried every available remedy—soda bismuth, bromide, hyd: acid, morphia, chloroform, hot and cold drafts, baths, poultices, cold, cocaine, amy, nitrite turpentine, purges, dote, and various dodges. I cannot use no better word to express all my efforts—all of no avail, except a hypodermic of pilocarpine, but the depressant effect was so great that I only tried it once. This stopped the hicough for two hours. On the 8th the hicough ceased for three days, during which time Mr. B. was sick three or four
times a day. He was able to get up and go about feeling weak and faint with headache. On the 11th they commenced again, and this time they were even more violent than before. The whole of his abdomen shook and in fact his whole frame shook. The rate was up to 16 to the minute. Mr. B. was put to bed and fed on a tepid milk milk diet, and after that on sterilised milk diet, both without success. As a rule about a quarter of an hour after taking nourishment up it would come with a gush. Often Mr. B. would also vomit up half a pint or more of pure mucus and slime without much smell. All this time aperients had to be given with an occasional enema. On the 15th I tried washing out the stomach with a bicarbonate soda solution. On the third day of washing out his stomach (always a delicate task as he was of a highly nervous temperament), on withdrawing the tube the first return of the water was tinged with blood, and after that for two days he had a coffee ground vomit and mucus. This haematemesis in no way pulled him down. I mean he did not get into a lower state owing to this. After two days the coffee ground vomit and black stools entirely ceased, and as before the vomit was mucoid. Acting on special advice on the 25th I began to feed Mr. B. by the rectum. 12 ounces every four hours of beef tea, or egg, and brandy. These were all well retained, and by the stomach he had nothing but sips of water.
and a little soda water. This lessened the sickness and Mr. B. took this form of food very well, but latterly the headache had increased and the hiccup continued. A languor and listlessness came over him on the 28th he passed his water in bed and continued doing so, but never passed his stools. I saw him on the morning of December 1st (a month since his first hiccup) and he was then asleep from the effects of a dose of sulphonial quin at midnight as his nights had been rather restless lately. At 12 noon on December 1st he began to toss about a good deal, lift up one leg, then another, one arm then another, and put his hands up to his head, but he never spoke. At 6 p.m. on December 1st he sank almost suddenly into a state of coma, and died 15 hours later. His hiccup continuing up to 8 hours of his death. I consulted over Mr. B's case with no less than seven doctors both local and distant.

General Facts

There were no obvious marked appearances—Mr. B. was a plethoric person. His cheeks were always surplished and ruddy, rather too much so— he was short necked and of a small build, short-legged. One on seeing him would always imagine that he was in the period of health. His temperament was decidedly nervous. He was careful to almost an exaggerated degree of himself and his surroundings—he was a model patient temperature always subnormal, and never rose to

(7)
normal during the whole course of illness.

Alimentary system. Lips thick and red, teeth good.

Gums tender and easily bleed. Tongue never quite clean
always inclined to have a little brown fur on it, even
when Mr. B. felt in the best of health. Suckations of
mouth always effective. Throat small and always unable
to swallow any large pill or cachet. Appetite good;
very abstemious. Five years past he has had heartburn,
nausea, gastric disturbance and flatulence on occasions
when indiscreet in diet, but as before mentioned in contact
of the stomach being ejected all was well. Has for
years past been in the habit of taking a compound
rhubarb pill every night which has given him one good action.
Abdomen covered with fat. no undue fluctuation, relaxation
distension or flatulence or dilatation of stomach.

No pain at all during whole course of illness over
abdominal region, not even on deep pressure. no fulness
or fluctuation. outline of liver normal.

Haemopoetic system. no enlargement of spleen nor any
suggestion of any haemopoetic obstruction.

Circulatory system. no pain palpitation, faintness or
dyspnoea, only a feeling of lightheadedness if patient ever stopped.
Mr. B. never put on his own boots for this reason.

Outline of heart normal. rhythm and quality of sounds
good. Pulse 65 a minute up to a week of his death
when it rose to 84 and remained between 84 and 90
up to 24 hours of his death when it went up to 110,
and 2 hours before his death was 120. Regular, strong.
good both pulses synchronous all through illness, and
both myself and other medical men who saw him all remarked
on the good tone of his pulse.

Respiratory system - Breathing 18 per minute cough now
and again and always some sputium with it, but never
annoying and excessive. Sputium viscid no smell and
no tubercle bacilli now in it. Chest well formed no
deficient expansion Sounds all normal Nothing could
be discovered anywhere on auscultation or percussion.

Integumentary system - negative

Urinary system - no abnormal constituent ever discovered
in urine

Sensory sensations - negative

Nervous system - no strabismus or change in pupils.

Taste always tarrying in character smell good Motor
functions normal T麻 to a month of death Mr B could
walk 8 or 10 miles a day Reflexes normal No change
in vasomotor and nutritive functions

Cerebral and mental functions - Mr B. for months
past could not concentrate his mind to write a letter
or fix his attention in any business matter. His memory
continued good. Even little worris he pondered a
good deal though they may have been of a most
bizarre description. Mr B always got awake once
or twice at night

I calculate during the month Mr B must have
breathed no less than 1480000 times.
33 cases recorded in The Lancet since its foundation
In the Lancet, July 4th, 1835, page 1440, Mr. Andrew Ellis wrote:

January 19th, 8 p.m., Samuel Johnson aged 25 years was brought to the hospital with a wound about an inch and a half in length and extremely deep, extending from the angle of the jaw towards the chin. The submaxillary gland was completely cut through, and there was profuse hemorrhage both from the upper and lower parts of the wound, supposed to come from the cut extremities of the facial artery. The bleeding could be restrained tolerably well by pressure made on the wound when directed towards the ramus of the jaw. He was extremely cold, pulseless and quite exhausted. The unfortunate man had been in a state of dependency for some time past and he had himself inflicted the wound with a razor. Soon after the patient arrived at the hospital the wound was enlarged and the bleeding vessel sought for, with a view to secure it in a ligature; however, the great depth of the wound, the constant supply of blood poured into it, and the retracted state of the artery, rendered the attempt fruitless. The wound was then plugged up with lint diffused in spirits of turpentine; graduated compresses were next applied, and kept firmly on with a roller.

On the 22nd he became alarmed by a fresh gush of blood. He immediately leaped out of bed, and ran out of the ward for assistance, crying out that he was "bleeding to death." The hemorrhage was restrained by compression and bandage.

On the 26th another severe gush took place. All efforts to stop it failing it was deemed expedient to tie the common carotid artery.
On February 1st he suffered a great deal from time to time during the day from sickness of stomach and hicouough. At 10 o'clock p.m. he complained of numbness in the affected side which extended from the head and face down the arm. He was ordered carbonate of ammonia, with a mixture of opium, and lemon juice to be taken during the efferveescence, but he refused taking it.

On February 2nd he took some broth, which seemed to agree with him tolerably well, but he has been very much teased with a very distressing hicouough. The legature came away with the dressing to-day. The wound is nearly healed, but looks pale and glassy. He is ordered a cordial mixture containing peppermint water, calcined magnesia, accetated mixture of opium, ether and syrup.

On February 5th he took the mixture regularly without advantage; the hicouough having continued with little intermission during the night and being at present very distressing ordered an podere, and a synopson of the epigastrium.

On February 5th hicouough as before; bowels confined. To have a draught of roaster oil and spirits of turpentine, and the podere injections to be repeated every third hour until the bowels are affected.

February 8th. The hicouough has continued with little intermission since the last report, although the bowels have been freely acted upon; twelve leeches were directed to be applied to the epigastrium, and a draught containing thirty drops of the action ephir to be taken at bed-time.

February 9th. The hicouough ceased immediately after the
took the opiate draught and he slept quietly during the night, however, the hicough returned at ten o'clock this morning, and at present as violent as before. He was ordered a blinder to the epigastrium, cathartic pills during the day and the opiate at bedtime.

February 10th. He slept for three hours last night without intermission, but the hicough annoys him occasionally to-day; in every other respect he appears to be quite well.

February 11th. He took an opiate draught every night since last report; the hicough has left him altogether, and he is in every respect perfectly well, but is unwilling to return to his friends.

After discussing the subject, Mr. Ellis went on to say the next feature in the case which I deem worthy of your attention is the very distressing hicough which occurred on the 5th of February; here, I beg to observe, that the causes and pathology of hicough are but imperfectly understood; however, it is usually considered to indicate a modified action of the diaphragm, sympathetically induced by irritation in the stomach. Taking this view of hicough it might be fairly supposed that in this instance it was the result of some injury close to the plexus vagus or phrenic nerves, in the neighbourhood of the wound, but when it is recollected that this symptom occurred, for the first time on the very day the ligature came away, which was the ninth after the operation, the idea of attributing it to any such cause must at once be abandoned. (On the other hand we ought not to forget the fact, that the medicines which
are usually administered for the purpose of correcting acidity in the stomach, and other causes of gastric irritation, were for a considerable time employed without advantage, and that it was not until the rectum opium was taken in large doses that any beneficial effect was produced.
I would thank you to insert this brief account of a fact which I think of much interest, and worthy of observation.

Oct. 29. Dr. Powell directed my attention to Edward Rose, aged 61, who is affected with rheumatism in the shoulder, which a strain has made more painful. He stated that almost always when he moved the joint he was affected with hicougue. I carefully investigated the matter, and on examining the shoulder which was tender, he hicougued violently and successively. On his raising the arm at my request, the same thing happened, and he related that it invariably occurred when he dressed and undressed. On his raising from the sitting to the erect posture I at once noticed the event; he said that he felt his shoulder at that time. I dashed some cold water suddenly in the face; a deep inspiration followed and hicougue also. In this instance, as in the preceding, the muscles of the joint were influenced. I could not ascertain that the affection ever happened unless the shoulder was moved. I conversed with him many minutes without noting it at all. He was surprised when I observed to him that I thought the affection of the shoulder and the hicougue were connected. His wife mentioned that in general he very rarely suffered hicougue, and is not nearly so subject to it as she is herself. The patient informed me that last winter his ankle became painful, after his feet had been wet (with a rheumatic affection probably), and that he used to suffer from cramp in the night time; and that often when he left his bed and walked about the bed to relieve it, he experienced hicougue.
Nov. 3. I again saw the patient. Mr. D'Orvel also examined him. The shoulder was less painful, and he did nothicough so often when he moved it, and not with the same violence when he did so, as before. There is an evident relation between the degree and frequency of the hicough, and the greater or less excited sensibility of the shoulder joint. He does not now always hicough when the joint is moved, or even when he knows that it is examined for the purpose of producing the affection.

This case is singular, and would have been once attempted to be accounted for by the term sympathy, a word which Müller so well describes "as explaining everything and yet nothing." I cannot but view it as dependent on the reflex function, illustrative of which there remain, doubtless, many interesting pathological phenomena concealed; and to this also would I attribute some symptoms in a case which Mr. Thomson has narrated (Hand., vol. ii., p. 1838-39). "The patient, on pressing the centre of a wound, in the forearm of the left hand, which had been inflicted by the breaking of an earthen vessel, a peculiar suffocating sensation was experienced in the gullet, and a roaring sound elicited." This instance is dependent upon the same principle as that I have described, though it exemplifies its operation in a different manner.

All cases of muscular motion excited by irritation, and clearly of an involuntary kind, that happen in parts where the "true" spinal marrow influences in health, are attributable to its agency.
On the 27th September 1844, a man, almost in a desperate state, was brought to the Hôtel Dieu; the extremities were cold, the venous pulse, the pulse extremely small, scarcely perceptible; the belly tender, especially at the inferior part; hemorhage, constipation, vomiting of nauseous matters, existed; and to complete the case the patient stated that two hernias which had existed for a long time had become painful. Dupuytren, uncertain of the diagnosis, prescribed bleeding and lavements; the same evening an abundant alvine evacuation took place, others took place during the night; the vomitings ceased, and the next day the pulse was found fuller, the face red, the abdomen pliant, and the intelligence sufficiently restored for the patient to be able to reply exactly to the questions put. He then said that he had had two inguinal hernias for eleven years, insufficiently restrained by a bad bandage; that in the evening after an effort they had escaped out of the bag and became painful. He had reduced the right hernia, a physician had put back the left. The symptoms were aggravated, and therefore he was induced to apply to the Hôtel Dieu.

Dupuytren asked what was to be done. There were neither vomiting nor constipation; nevertheless there were the greater part of the symptoms of strangulation. He made the patient walk; the left hernia was reduced easily, and returned again as easily.

The same evening the hicough, which had continued without ceased; the abdomen became soft, although still tender on
pressure, particularly in the hypogastrium and the pelvic regions. At this moment Dupuytren decided to operate, convinced, said he, "that little inconvenience would be produced by the operation was were he deceived, and great good if there were strangulation." He operated on the right bound, there was no strangulation; he operated on the left, there was none either. The man got well; and Dupuytren observed, that, "it was very doubtful whether the two operations had not contributed to this fortunate result."

1st Case.

Michael D. J., aged twenty-two, tall, muscular, and well-formed, was seized with a rigor, followed by the usual symptoms of inflammatory fever. Temperature high; skin moist; face covered with profuse perspiration; pulse quick, full and full; thirst; irritability of the stomach; excessive headache, with a tendency to vomit; coughed up a little phlegm, rusty or rather streaked with blood.

He had been bled from the arm to about twelve ounces by Mr. — who also had prescribed a purgative and a diaphoretic mixture. Such were the circumstances of this case previously to my visit, which took place about eight hours from the period of attack. Upon examining the patient I found the above symptoms present in an aggravated form; the headache being intense; respiration much hurried; slight cough; vomiting; chest clear on percussion anteriorly with rather forcible respiration; labially, and between the shoulders, percussion and stethoscope discovered nothing further than a louder breathing than natural. Abdomen free from pain, in fact, no particular pain otherwise than that of the head; no wandering of the mind. The purgative had acted; the Verecution was repeated; the diaphoretic continued; calomel every six hours; have off and cold to the scalp.

Second day, nine a.m. No abatement of symptoms; headache increasing; respiration quicker; every second or third expiration being accompanied by hiccup. Four
ounces of blood was taken from the temporal artery to relieve
the headache, and Dr S, who was requested to see the patient
at ten p.m. of the same day, diagnosed abscess of the liver,
and drew attention to a bruise with the first sound of the
heart, which he attributed to the loss of blood. The
mechanical and anti-phlogistic treatment was relinquished,
and a sustaining line adopted. A blister was applied over the
right hypochondrium and the epigastrium region. The case
progressed, daily getting worse; stomach rejecting everything;
bloody accompanying every respiration; intellect perfectly clear;
no sleep. The entire weight against the diaphragm was
surrounded by a belt of flax, and about three days
before death, it was again ineffectually attempted to bring
the system under the influence of mercury. The patient
died about fourteen or fifteen days from the commencement
of the attack, the bruise persisting to the last, and pus
was supposed to have seen in the dissections, but which I
believe to have been fallacious. The patient throughout
could not lie in the horizontal position.

He aged twenty-one, stature five feet four inches, muscular,
lathy, well made; seen three days after seizure; pulse 110,
firm; respiration much hurried, and entire inability to
rest in the horizontal position; no cough; temperature moderately
increased; tongue moist, coated; thirst; excessive vomiting,
and constant harassing bruise; no yellowish tinge of skin
or conjunctivae; no headache; anxiety of mind; chest clear
on percussion anteriorly, also posteriorly on the left side, but
in the right, internal to and below the scapula, extending
a few inches towards the sub-mammary region, there was
dullness, a rushing sound and very indistinct respiratory
murmur immediately above; the breathing was much increased.
The fullest inspiration caused no pain further than by
aggravating the hicouugh, yet by digging the fingers into the
intercostal a severe lancinating pain was produced over
that part. The bowels previously opened by domestic medicine.
Treatment: blood letting, repeated blistering the parts: the entire
chest rubbed every three or four hours with oil of turpentine,
and the system brought under the influence of mercury,
which was effected principally by injection, as the stomach
rejected everything. The hicouugh persisted for seventeen days,
gradually giving way as the salvation advanced, and
eventually passed with the chest symptoms. Cured.

Case 7. Aged fifty five, a thin delicate man, a blacksmith,
but had relinquished his trade lately; had been suffering
from constant hicouugh for upwards of eight days previously
to my visit, and for which he had had almost every remedy
of antispasmodic to. Symptoms: The right pleura and
lung affected as the cover and right on the diaphragm above
the liver; pain of right side and shoulder, extending to
the ear; dulness and absence of respiratory murmur;
embarrassed cough: hicouugh preceded each expiration,
even during the short snatch of sleep he occasionally had
Treatment similar as in the last. The hicouugh persisted
for twenty six days. Cured.

Case 8. Aged forty-five, a strong robust farmer. Had been for
a few days under the treatment of my friend Mr. C.
This only symptoms were those of a very partial pleurisy
of the right side, attended with hicough, no cough: pulse
almost natural; stomach returned food pretty well—
A small bleeding; blistering, cataplasm and opium night
and morning which effected a cure in a few days
without producing salivation. I fancy that cupping
with a blister might have been equal to the removal
of this slight attack. The hicough from the first
continued for about twelve days.
The chief symptoms that presented themselves after the
second day are not given in the first case, as they were
entirely in a letter to Dr. S. and no other memoranda
being kept, besides there was a difference of opinion in
the cases. However, I have but slight hesitation in
asserting that they bore a marked relation to those of
the three following, and to me at least clearly pointed
to chest disease.

White line
In The Lancet, March 4, 1865, page 278, Delta describes a case of a man aged seventy who was seven years ago attacked with hiccough and in spite of all that could be devised by his medical attendant, one of whom was a very distinguished physician, he obtained no relief for three months, when, after change of air, the affection seemed gradually to wear itself out. The long duration of the case had enabled him to try in succession various remedies which he briefly enumerated. At first his diet was carefully regulated, the bowels attended to, and, on account of the acid eructations from the stomach, a mixture of bromate and magnesia, with prussic acid, was given for some time. This method failing, a chloroform and tinctura bielladonnae liquid was applied to the ephquestration, and a quarter of a grain of extract of bielladona with two grains of sulphate of quinine given three times a day, but to no purpose. He had had a full dose of the extract of male fern, in the hope of expelling any irritatory agent, and quinine and epson and chlorophyl were also given without avail. By the advice of one medical man vinegar in half ounce doses was administered; and by the advice of another, a quarter of a grain of the extract of rue stricca was given three times a day. He was also applied to the nucha, and was taken internally. Sinapisms and hot epiphorems were applied to the ephquestration and sinapisms to the nucha. A blister was not applied to the nape of the neck, partly because every form of counter irritation was fruitlessly employed in his last attack, and partly because of the fear that sloughing might result in a man of his years, no consequence of the violent movements.
of the neck which take place during the paroxysms. He had also taken for some days a mixture of ethylcium, ammoniac, iodide of potassium, and carbonate of potash to combat any possible gouty or rheumatic pain. Complete anaesthesia was produced with chloroform with the result of only temporarily relieving the sufferer. None of these remedies had been given up, except after what was considered a fair trial, hence the was also prescipted. At careful physical examination revealed nothing abnormal. The pulse, generally seventy-five, was however one day slightly irregular. When the attacks—there were occasional intermissions, but without any periodically were most violent, the patient was slightly delirious. He complained also of a general feeling of heat, and his face flushed a little.
In The Lancet, March 11, 1865, page 376, W. S. T. writes,

A gentleman, rather advanced in life, and accustomed to free living, had an attack of bilious colic on suddenly one evening after dinner, which continued without any abatement for a period of twenty-one days. It was accompanied with slight pain in the epigastrium. The bowels were in the worst possible condition, and effervescing draughts, with small doses of jaborandi, administered without giving any relief. Several other remedies (giving each a fair trial) were adopted; mixtures with bismuth, with bicarbonate of potash, creosote, laudanum &c. &c., fomentations were applied to the epigastrium, which relieved the pain, but did not cause the bilious colic to cease. After a period of fourteen days a physician in town of high standing was called in and prescribed two tablespoonfuls of lemon juice with five millims. of chloride of opium every four hours, and a bella donna plaster to the epigastrium. That course of treatment, although persevered in, like the rest, did not give any relief.

Towards the close of the third week the advice of the late and most eminent physician of the day, Dr. Judd was requested. He entirely concurred with the treatment that had been adopted, and mentioned at the same time a similar case which had occurred to him the week previously at the hospital.

The following was his plan of treatment: A scruple of calomel to be given in a small teaspoon of brown sugar every six hours up to three doses, to be put in the mouth dry. Nothing in the shape of nourishment to be given, with the exception of milk, of which small quantities were to be given frequently. The calomel of course produced初步 medication, but had a marked effect; the bilious colic ceased within the first twelve hours after the first dose (so that only two doses of the calomel were administered) and from that time the patient rapidly recovered, regaining his strength by the aid of quinine, were he...
In The Lancet, March 18, 1865, page 506, Dr. King writes:—

In a case of obscure meningitis I used every mode of treatment I could think of, without any permanent result, till I adopted the following:

1. Hot fomentations to the region of the neck, over the cervical plexus of nerves, the cervical vertebrae, and as far forward as the clavicle, for fifteen minutes, and then half an ounce of tepid tincture of opium to be well rubbed in with the hand over the same portion of the body, and to be continued at intervals of four hours till the patient sleeps. Contact with the external air during the intervals must be prevented by oiled silk and cotton wadding round the neck.
In The Lancet, March 18, 1865, page 306, Dr. A. Duke, favours the application of a small blister to the origin of the phrenic nerve, and giving the patient ten grains of compound galbarum pill three times a day. He had lately had a most severe case of hiccup which, after having tried a great variety of remedies without success, yielded to the above.
In the Lancet, August 21st, 1869, page 264


d Case of persistent and alarming hiccupage in pneumonia

e caused by the subcutaneous injection of morphia

By John Constable M.D.

On Monday, May 19th, I was called to visit Mr. A aged 70, and after examination found the following state of matters.

The patient had gone to visit a friend, about ten miles distant, on the previous Saturday evening, during the prevalence of a cold east wind. After partaking of supper he felt very unwell and retied to bed. In the morning he felt worse, and began, as he himself expressed it, to cough up and spit blood.

On the following day he was brought home in an open conveyance. When I visited him, two miles from my house, on Monday morning, I found him labouring under all the ordinary symptoms of pneumonia of the left lung; decided dulness of the lower two-thirds of the left side of the chest; fine expectorations over the corresponding lung; a copious rusty expectoration; annoying cough; pulse 120; tongue coated and dry; urine scanty and thick etc. The bowels had been moved with castor oil. The most distressing symptom, however, was a persistent hiccupage, which had begun shortly before I arrived. In this symptom, occurring in pneumonia, and its treatment, I wish particularly to call the attention of the profession.

Thinking the hiccupage would readily give way after the bowels were moved and the secretion corrected, I paid, at this time, little attention to it, prescribing more especially for the pneumonia.
I reduced a poultice of linseed meal and mustard to be applied round the whole of the left chest; a fresh poultice of linseed meal to be applied every three hours; six grains of grey powder to be followed in the evening by a heaspoonful of grippeps mixture, and occasional doses of a mixture containing liquor of the acetate of ammonia, spirit of chloroform, and sweet spirits of nitre. Food to consist of sweet milk, anchovy bread.

May 11th. Pneumatic symptoms no worse. The patient had however, a restless night, more especially on account of the hiccough, which was no hollow. I now tried various measures such as pressure, cold draught of water, sudden alarms, and warm evacuation over the stomach and diaphragm; mustard poultices repeatedly applied. A draught containing thirty minims of solution of morphine of morphia at 10 p.m.

12th. Pneumatic symptoms going on favourably; but with very short intervals the hiccough continuing as severely as ever, shaking the distended stomach and its contents in a very violent manner, evidently from spasmodic contraction of the diaphragm. The bowls were again freely moved, and various drugs. Spirit of chloroform, mixture of opium, extract of belladonna, decoction of quassia, received a fair trial without any benefit. Sudden shaking, slapping of cold towel over diaphragm, pressure over phrenic nerve to, but hiccough no better.

13th. Patient very much exhausted and diseased, as the hiccough, with peculiarly any interval, had continued all night as severely as ever. I was at my wits end, not on account of the pneumonia proper, which was progressing as favourably as could be expected, but because of this formidable and persistent hiccough. I
continued some of the above mentioned remedies and asked Professor Bell of St Andrews to see the patient with me in the evening. He confirmed my diagnosis as to the pneumonia, and agreed with me in thinking that, in so far as remediation was concerned, it might be left now greatly to itself. We resolved to continue the constant poulticing to the chest, and address our treatment more particularly to the hiccough, which had now reached an alarming extent, and threatened at no distant period to kill our patient. Some of the remedies I had been employing renewed another local spirit of chloroform, bromide, lime water and cold soda water to, we could not be got. A large belladonna plaster was applied all night over the region of the stomach, and a dose of chloroform administered. If these remedies should fail we agreed to apply a cannabused blister over the region of the stomach and diaphragm, dressing it with solution of morphia; if that also failed, to try the careful inhalation of chloroform, and to keep the patient under the influence of it for some hours, or longer if necessary.

14th. The patient had slept scarcely any; the hiccough was as bad as ever, and had been so all night. During the day several of the before mentioned drugs were administered, and the blister applied as agreed to at the consultation. The patient was now taking very little sustent, and what little he did swallow was almost immediately rejected by the belching and retching of the stomach, in connection with the violent and distressing contractions of the diaphragm, which were shaking not only the whole body, but the very bedstead by their violence.
15th. Having our patient in a very languid and prostrated condition when I visited him this morning in company with my friend, Mr. Weber, a medical student of his fourth year, I resolved to commence carefully, with his assistance, the inhalation of chloroform, as agreed to at the consultation with Dr. Bell, as the hicough was continuing as bad as ever, in spite of everything that had been done. But, before doing so, weighing in my own mind the fact that this hicough was in all probability produced by spasmodic contraction of the diaphragm, caused by the abnormal excitement or irritation of the phrenic nerve, and remembering the beneficial, almost miraculous, results of the subcutaneous injections of morphia in nervous complaints, such as neurasthenia, sciatica, cramps, tic douloureux &c., I determined to give it a fair trial.

I had with me a phial of the solution of morphia of morphia and the above Woods syringe, by which I carefully injected ten minims of the solution under the skin over the intercostal muscles. I presume the arm might have done equally well. It will scarcely be believed, but the fact is, notwithstanding that in a few minutes, as if by magic, the hicough stopped completely and did not return. The patient was left of course in a very weak and exhausted condition. I administered a dose of chloroform at bedtime.

16th. The patient had a good night, the first for more than a week, and was greatly refreshed. No return of the hicough. The stomach now retained milk, small quantities of beef-tea, and a teaspoonful of treacle occasionally. Physically, examination showed that the pneumonia was progressing favourably.
The purty expectoration gradually got less, and in a day or two lost its rusty colour; the pulse counted 80 beats per minute; tongue clearing at edges, and more moist. In short, from this day the patient slowly, but decidedly, recovered uninterruptedly, till at the end of three weeks from the commencement of his illness, he was able to resume his ordinary occupation, though complaining of being easily knocked up for want of strength.

Remark. It may be remarked by some that the disease in this case may have reached the crisis on the 15th day, and that the hiccup might have given way without the subcutaneous injection of morphia. If so, it was a very remarkable coincidence that within a few minutes of the operation nature should have interposed and stopped the hiccup. The patient, a most intelligent person, is teach'd by practice, insists that there was no coincidence of cause in the matter, and that he is quite satisfied the injection of the morphia stopped the hiccup, and saved his life. I am of the same opinion.

Before the above case occurred I had not seen hiccup to any extent in pneumonia and was not aware that it accompanied that disease as a symptom. A medical friend has informed me, however, that about a year ago he had in his practice a case of pneumonia very similar to the above, in which hiccup came on on the third or fourth day; all the usual remedies were given without any benefit, and the patient died. He tells me, of hiccup, and not of the pneumonia properly speaking.

Of course the subcutaneous method of cure requires further confirmation, but I think the facts I have narrated, in connexion with the above case, warrant me in bringing the subject prominently before the profession.
In The Lancet, July 29, 1871, page 184, J. Risce recommends, the application of the ether spray to the neck and epigastrium (so as to affect the pneumogastric and phrenic nerves) with full doses of bromide of potassium at the same time giving 20 and soda water. Should this fail he is inclined to blister the neck and give large doses of quinine during the day, and chloral hydrate at bedtime.
In The Lancet, July 21, 1871, page 181, E. Heldtich writes:

I found while treating this symptom in yellow fever cases at Bermuda and Jamaica, the following very efficacious:

1 drachm Absinthia, three grains; extract of hyoscyamus, two grains:

To make into a pill to be taken every second or third hour.
In the Sanet, July 29, 1871, page 181, James Thompson
recommends the trial of ten drop doses of chloroform,
and six or eight applications of Corrigar's moist to the
epigastrium. In a recent case he found these beneficial.
In another case, a troublesome hemorrhage depended on a
loaded rectum, and a small rectal purgative relieved
the irritation.
In the Janet, Aug. 5, 1871, page 211, A. Parks writes,

I especially cured a hiccup of over twelve months' duration in a gentleman whom a mere accident led to consult, by the following draught to be taken at bedtime: -

• Brome of potassium, one dram, tincture of veratrum, half a dram, tincture of hyoscyamus, one dram,
• camphor water, one ounce and a half
In The Lancet, Aug. 5, 1871, page 211, E. Wenz writes that the best means of stopping haemorrhage is to hold up your arms above your head for a minute or two. It is more effective in a standing than in a reclining position.
In the Lancet, March 3, 1858, page 392, E.S. King says: I have suffered myself, from persistent hiccup or three separate periods of my life in a manner which the word "aneurysm" will alone describe. The literature of aneurysm, as your correspondent remarks, singularly poor. I have been looking for any reference to its pathology or therapeutics worthy of re-mention; yet the disease or symptom is far from uncommon either alone or as a complication in other disorders. When a student at Edinburgh University Prof. Wilson told me that he had known it prove fatal, and that, when persistent, it was a most unsatisfactory thing to deal with. This was in reference to a dyspeptic patient. My own experience has been that no cure can be depended on for a cure, but that a compression seldom fails.

In my last attack I used first a three ounce dose of a strong infusion of mustard seed, followed in two hours by two draughts of pure glycerine, taken every three hours. I also rubbed in warm laudanum and chloroform along the course of the phrenic nerve. In the case of a patient whom I saw in consultation some years since suffering from aneurysm, great relief was obtained from the hypodermic injection of morphia and by wrapping a hot sponge compress.

I have also heard of benefit from the use of the spinal ice bag, alternating with heat.
In the Lancet, March 3, 1833, page 392, T. J. Lea writes of this case.

The patient was an elderly gentleman in a good social position, and the least irritation or exertion would invariably bring on an uncontrollable attack of hiccup. Its persistence and invariability resisted every mode of treatment. The cause of this was for some time most obscure, and gave rise to many hazardous and absurd attempts at a correct diagnosis by those who saw him. Soon, however, other well marked and prominent symptoms revealed the development of cancer of the stomach, of which he ultimately died, the only initial and prominent symptom being persistent hiccup.

I found the remedy that afforded marked relief was ten minutes of mixture of opium every few hours and scrupulous avoidance of all saccharine articles of food.
In the Lancet, March 3, 1863, page 373, H. Walker recommends
Hyoscyamine, 1/20 gr.; arseniate of strychnine 1/20 gr.; trichloride
of nicotine 1/5 gr. (the alkaloid of coca) every half hour
until relieved, all three together. One is able to obtain these
alkaloids in the above doses in the form of little granules
or pellets (which should be placed on the tongue and
swallowed with a drink of water) from Messrs. Burgoynes,
Barlow, etc., in little tubes containing twenty each, and
will, I think, have reason to be satisfied with the result.
In The Lancet, March 7, 1887, page 592, C. T. Hawkins mentions that in a case that came under his notice, after almost every known antispasmodic had been tried, a subcutaneous injection of a quarter of a grain of acetate of morphia, followed next morning by a lavement of cold water, together with an aloe and gentian pill, was tried. The spasm, which was of a most persistent character, very soon yielded after the hypodermic. It may be interesting to know that the patient was the subject of aortic valvular disease.
In The Lancet, March 3, 1883, page 392-70. Dr. Sten finds relief from administering a few drops of ether for his patient to inhale, and the following mixture prescribed:
Sulphate of ether, half a drachm (or one drachm);
Squamosa wort, half a drachm; tincture of digitalis, half a drachm (or one drachm); sulphate of magnesia, two drachms; chloroform water to six ounces. Two tablespoons every four hours.
In The Lancet, March 3, 1853, page 397, J.E. Arney recommends a tablespoonful of mustard steeped in four ounces of boiling water for twenty minutes and strained. He had found this to cure two cases of persistent bronchitis. The patient should drink the whole of the infusion at one draught.
In The Lancet, March 3, 1883, page 392, P.M. de la Motte described the case of a lady patient of his who occasionally suffered from hiccough, of which the attacks were violent. Internal remedies had been given without any benefit, but twenty drops of chloroform inhaled immediately stopped the attacks.
In The Lancet, March 10, 1883, page 1137, Jan McCulloch agrees with Mr. P. E. de la Motte.

I had scarcely concluded today the perusal of the column of communications on persistent hiccup, continued in your last issue, when I was called out to a case of this nature. My patient, a gentleman aged eighty-seven years, had been troubled persistently for three days (night and day) and then sought advice.

Great The inhalation of upwards of twenty drops of chloroform brought immediate relief to my patient. A few hours subsequently an attack was arrested at its onset by the same means.
the draught at midnight and slept well. His condition was quite satisfactory. There was no hiccup, but the voice was husky. The pulse was good. At 9.30 pm he had been without hiccup all day. The voice was still husky and the throat sore. There was some precordial pain during the evening and throbbing of the heart. The pulse rate was 52. Examination of the fauces gave a negative result. On the 27th he had a good night's rest without the draught. There was no hiccup for twenty-four hours. He felt very weak, but the pulse was good. On his eyes being examined the fundus was found to be normal, as were also the optic disks, but there was an abnormal refraction (both eyes -6.0). On the 30th there was no hiccup. The patient was convalescent and was allowed to get up for half an hour. On the 31st his condition was satisfactory, though he felt very much shaken. He was dressed and came downstairs. The voice was only slightly husky.

Remarks. In this case the history of previous attacks of hiccup, and also of the 'sinking' attacks which appear to have been of an epileptiform character, is interesting. In the absence of any obvious cause, e.g. uraemia, new growths to one may look upon the attack as a form of epileptiform neurosis. Though of course, it is possible that there had been some local pathological condition. The pulse even at the height of the attack was never more than 60 per minute and usually not over 56. The best sign all through the attack was that the patient drew his foot well. The severity of the hiccup may be understood by stating that frequently
the muscles so shock the body that the bed, a heavy one, shook also. No other muscle besides the diaphragm was implicated. The urgent symptoms on the night of March 21st, which made his relatives think that he was dying, were not so very alarming as far as I can make out. Some collection of mucus probably caused the noisy breathing, which seems to have awakened the patient himself, for he woke up suddenly and asked what was the matter. The bad symptoms on March 25th may I think be put down to the doses of chloral that he had taken. There is no family history of paroxysmal nervous.
In the lantern, August 21st, 1878, John O. Leonard, M.D., records: I find that on Sept. 14th, 1878, I was called to see a man who had been coughing incessantly for two days and nights. I found the patient to be a large plethoric person aged 60; his pulse was rapid and small, the skin hot and dry, and he suffered with great restlessness with heavy delirium, together with coughing and hiccupping with every inspiration. It was impossible to determine with any degree of accuracy the condition of the lungs and heart owing to the agitation of the patient and the great commotion within the chest.

The patient appeared to be in a very critical condition. I prescribed an active hydragogue and half a grain of sulphate of morphia by the mouth. The cathartic acted in a short time and the patient fell asleep, but the hiccup continued. I then began to use anti-spasmodics and sedatives, and local counter irritation and everything that might be expected to quiet the symptom for about a week, but without the least effect. Death seemed inevitable.

Just for the sake of doing something, I then ordered twenty deeps every half hour of a mixture containing equal parts of acetic and sulphuric acids. An unexpected and decided improvement took place, and my patient became convalescent in twenty-four hours. He had hiccupped constantly day and night, awake or asleep, under the influence of hypnotics or not, for eight days.

He improved further well, and recently I learned that about ten years after the attack of 1878 he died from a similar attack.
In the Lancet, Oct. 19th 1895, R.W. Allen of Glasgow mentions a case of hiccup and sneezing. Not a single day passes without the patient suffering from an attack, which very often continues from four to five hours, and leaves her in a very collapsed condition, and she has continued so for two years. She is a nervous patient but not particularly so. Her diet is a good one, and she takes a fair amount of outdoor exercise, and lives in a good social sphere. There is no organic lesion in the throat nor need to give rise to any local irritation. Her powers of digestion are good. All the usual remedies, both local and constitutional, have been tried, but of no avail.
In The Lancet, Oct. 26th 1896, Dr. Macera, tells a case which he pronounces to be that of a goitry origin and in which Salicin in thirty grain doses three times a day effected a cure in four days or less.

He thinks that if a case of hiccup be due to organic nervous system derangement producing an erythematous condition of the nasal, pharyngeal and gastric mucous tract of an intermittent nature, small doses of arsenic, nux vomica, and soon three times a day, with milk and lemonade night and morning, will be the remedy. He has known a case of a gentleman affected with sneezing which suddenly attacked him after withdrawal of a few weeks, and lasted day and night continually.

He has known a case where hiccup, sneezing and laryngeal asthma were periodic visitants. Absence and tones relieved the first; salicin cured the second.
In The Lancet - December 14, 1877

A case of lumbar of unusual duration and severity: Successful treatment by galvanism.

By George W. Newbey M.D. London, Senior Physician to the Hospital for diseases of the Heart, Soho Square.

A woman aged 24 years, first attended my out-patient clinic on Oct. 30th, 1875, complaining of persistent lumbar pain, from which she had suffered for a week. The attack had been preceded by a protracted period of overwork and worry. She was markedly anaemic, but nothing else could be detected upon a physical examination.

She improved very much under treatment consisting of vinegar, bismuth, and arsenic, but still continued to have a mild attack every few days. In March, 1876, she had a severe fright, after which the attacks greatly increased in severity and frequency. It was found that the medicines which formerly did her good were now without good effect, and in the case of the iron it made her worse. She derived much benefit from bismuth with which I succeeded on two occasions in stopping the attacks for a few days. In each case as she was so anaemic (haemoglobin 30 per cent, red corpuscles 2,300,000) I followed it with iron, with the result of immediately after two or three doses bringing back the lumbar as bad as ever. Valerian and assafetida made her worse. In April 1876, whilst waiting in the hall of the hospital she had the severest attack of lumbar I have ever seen in my life, and
I thought at one time that she would die then and there from failure of the heart. I had her at once taken into the consulting room and a continuous current of about 8 milliamperes applied to her, the anode being applied alternately for a minute or so at a time, stabbly to the side of the neck, whilst the cathode was placed upon the epigastrium. The effect was almost instantaneous, the attack passed away, and she had no return of it for several weeks. At the end of this time however the affection returned and she gradually became much worse, the attacks frequently lasting for a whole week with, as the patient declared, no intermission. There would then be an interval of a few days, during which time she would have merely several attacks in the twenty-four hours lasting an hour or so each, and then another long spell of almost continuous hecchough. As she daily grew weaker I decided to take her into the hospital in order to give a more extended trial to the galvanism which had been so successful on a previous occasion, and she was admitted on November 27th, 1896.

On admission it was recorded that the spasms were of such violence as to shake the whole body, and give her the greatest distress. She slept very little as she was continually awakened by the hecchough which occurred with less frequency during sleep. The treatment prescribed was the daily application of 15 milliamperes of the continuous current, the anode on the epigastrium and the cathode on the small of the back; this was followed by the electric brush
to the epigastrium. For the first few days she improved very much, but as this was not maintained, the application was allowed, and the anode was applied alternately to the pneumogastric nerves in the neck whilst the cathode was placed on the nape of the neck. From this state she rapidly improved and was discharged on Jan. 21st, 1897, being directed to continue the treatment in the out-patient department and to attend twice a week for galvanism. This treatment was continued until May 1897, when all attacks having ceased for over a month she was finally discharged. There has been no relapse.

It is a remarkable thing, that the administration of wine should have invariably brought on an attack, and I think that the fact of its having done so goes far to suggest that in this case the affection had its origin in some irritation reflected from the stomach. This theory would also be strengthened by the fact that galvanism had little or no effect until it was applied to the pneumogastric nerves. Against the hypothesis that the affection was of an hysterical nature we have the facts that it occurred during sleep, that the medicines usually of service in hysteria were without effect, and that the suggestion involved in the daily manipulation with the galvanic current and electric brush did not even until the former was applied in one particular manner.
25 cases recorded in
The British Medical Journal
since its foundation.
In the British medical journal, Nov. 12, 1883, p. 504, R.H.H. wrote,

Being troubled the other day with an attack of bronchitis, it occurred to me that the inhalation of tobacco smoke might prove useful. I was surprised to find that it gave me instantaneous relief. Since then I have used it in several other cases, and have invariably found the attacks to be immediately arrested. It is true that the inhalation of the fumes frequently causes considerable personal inconvenience, and in some cases may be objectionable; yet the action of the "fragrant weed" is so remarkable that it is perhaps deserving of note. It is of course, possible that the same result might be obtained from the inhalation of steam or vapour, but of this I cannot speak with any authority.
In the British Medical Journal, May 10, 1883, p. 473.

Sir: Hallé writes,

I was able instantly to check an obstinate case of hiccup by a subcutaneous injection of one quarter grain of morphia. The cause of the hiccup was a desquamation condition of the alimentary canal. Repeated aloetic cream cured the complaint; and the frequent use of brine and pure water has prevented the return of what had previously been an almost annual trouble.
In the British medical Journal, Jan. 19, 1884, p. 103.

Dr. Kingbury, Blackpool, writes

On July 14th, 1883, I was called to see Mr. W.H., aged 50. Two days previously, whilst walking in the street, he suddenly became giddy, reeled, and had to cling to a railing for support. With assistance he got into a cab and was brought home. During the night he began to hiccup, at first only occasionally, but soon very frequently.

When first seen, it was about forty-eight hours after the attack in the street, and about forty hours since the hiccup began. He had tried all sorts of remedies, suggested by his wife and friends, also some medicine supplied by a neighboring druggist, he had plunged himself, produced vomiting, and blanded his abdomen, but was in no way relieved.

Bromide of potassium, belladonna, camphor, acetic acid, spirits of chloroform, hydrochloric acid, spirit of ammonia, morphia, pressure on the sphenic nerve, and even the epigastricum were all given; but none of these had any effect, even large doses of morphia, hypnotically, only producing sleep, during which the hiccup continued as before.

At last, after twelve days incessant suffering, thirty grains of chloral, hydrate, induced sound and undisturbed sleep for six hours and the patient awakened, free from his torment.

Since then I have had several opportunities of trying chloral, under similar, though less aggravated circumstances, and have always thought that a liberal administration of this drug produced prompt relief.

Levitt recommended chloral for hiccup, in the medical and chiroptical Review for 1871.
In the British medical journal, March 1, 1804, p. 460.
Dr. Brewer of Cambridge, writes,

As a commentary on the case of "persistent hiccup, treated
by chloral," quoted in the issue of January 17th, page 103, I should
like to relate my experience in a case of obstinate hiccup which
continued about fourteen days. I am far from wishing to disparage
the good effects of chloral-hydral in this disorder, as I know it
has frequently been successful. Still Dr. King: saugh's success in this
recent instance must be set against my total failure in a twin
case, also quite recent.

I was called on October 17th to a man, named also W. W. and
aged 56, who, it was stated, had been troubled with hiccup about
every ten or fifteen seconds during three days and nights. He also
vomited continually; the bowels were acting slightly. He had been
drinking beer for six weeks, and had consumed enormous quantities
of spirits besides other stimulants. I thought the hiccup might
be due partly to the mechanical effect of the hiccup, and partly
to irritability of the stomach. I used i.e. and gave four hypo-
dermic injections of morphia in twenty-four hours. Altogether
a restless sleep of about two hours was obtained, the hiccup
ceasing at intervals, but recurring immediately the patient awoke.

I carefully examined for symptoms of intestinal obstruction, but
found none. I now tried chloral-hydral in doses of twenty
and forty grains. The patient took it like water, and with
no more effect. At last, after four days trial, during which
time over three hundred grains had been consumed, I abandoned
it. I now assumed that the stomach and bowel, in the upper
part, must be partially paralysed by the large amount of alcohol.
which had been taken; and, although the abdomen was not tympanitic,
I felt satisfied there must be pressure on the diaphragm. I was
the more convinced of this as the patient had by mistake, in twenty-four
hours, taken the whole of four ounces of castor oil which had been
prescribed for him, and had experienced little inconvenience.

I began to give large enemata of various kinds, and ordered tepidative
baths to the abdomen. When two or three enemata had been used, the
bowels began to act a little more freely, and some small offensive
motions were passed, and some flatus accompanied the returning fluid.
At the time the use of each enema was followed by about one or two
hours' relief from the hiccough, though it returned after this. The
diet was carefully chosen, and sedatives given, as hiccough returned
at once on contact of food with the stomach.

After six days from the use of the first enema the hiccough
ceased entirely, leaving the patient reduced very much by fatigue
and lack of nourishment.

His great strength and muscular power had been conspicuous
in the neighbourhood, but he now followed by his bedside. Aedesia
convalescence has been further delayed by a sharp attack of
phlebitis of the left saphena vein, followed by a less severe
one on the right side.

Possibly the difference of result in these two cases may be due
to an unlike pathology, both probably being nervous in origin,
but the one due mainly to a loss of tonicity, the other to the same
plus a chemical change in the nerve endings from alcoholic
poisoning. However this may be, the cases illustrate the
value of collective investigation.
In the British medical Journal, Dec. 17, 1885, p. 1155.

Dr. Charteris of Leeds writes,

Miss D., aged 25, of middle height, ten stone in weight, hair and complexion of a yellowish red, was seen on July 29th, 1884, with m.t. pain of Leeds. She had extremely severe and rapid uraemia; it was impossible for her to take any food or to breathe properly. Only during sleep or under chloroform was a single ordinary respiration act performed.

There was no decisive evidence as to immediate causation, but her constitution was necrotic. Her father, who drank much, died at 43; her mother was of emotional and excitable temper, and the patient was the only survivor of several children. Her teeth were very defective. At, or shortly before, our consolidation she had dyspepsia and palpitation; in a week the hiccup began—ceased. At 15 she had had one child. A pleurisy of the uterine followed, but had improved, and now gave her no sensible inconvenience.

Under treatment by mouth and hypodermically, occasional inhalation of chloroform, and nutritious enemata, the hiccup gradually subsided in ten days. After a week, it returned and lasted eleven days. In a few days more, it again returned, and retracted the treatment. I now suggested the use of pilocarpine. One fourth of a grain of the hydrochloride was injected; in ten minutes the hiccup ceased—reurred at intervals of a few days; on every occasion pilocarpine checked it.

From October 9th to November the patient slept very much. Previously, periods of insensibility had alternated with periods of excitement. At the end of December, she became delirious,
and continued to be so for six weeks, talking almost incessantly about a theatrical performance which she had recently seen. She also refused food and gave much trouble in this respect. Soon after the delirium had passed off, the headache again appeared as a test, but bore injected warm water subcutaneously, but without result. After thirty minutes he injected pilocarpine; the headache ceased in ten minutes. A subsequent attack, caused by a fit of laughter, was similarly checked.

In April 1885, the spasms returned suddenly, without discoverable cause. Pilocarpine now failed to relieve her; one third of a grain subcutaneously had little effect of any kind. She was then admitted into the infirmary. The spasms were not so violent as before; only 26 in a minute, and as before, perfectly rhythmic. She felt quite well in every other way, and her face, though slightly livid, wore a cheerful and even smiling expression. Pilocarpine was again tried, but again failed. Morphine caused only a short sleep. Sixty minims of morphia and morphia scopolin were therefore given every two hours. After the eighth dose, she slept four hours; the spasms next day were much diminished in strength, though not in number. After further sleeping pills, on the fourth day, they ceased suddenly.

So far (December 1885) there has been no recurrence of them. During the last attack, she had conjunctivitis in the right eye, and she has frequently had it since that time. She has also within the occasion slept almost constantly for three days.
In the British Medical Journal, Dec. 19, 1885, page 1155. Dr. 

Churchill of Leeds, writes,

In another case of bromoencephaly, occurring in a neurasthenic woman whom I saw with Mr. B. Gray, Heinl, acetolalia 
checked the spasm. But from cases of this kind, it is not 
safe to argue as to the real power of drugs. Acetolalia has 
seemed to be distinctly useful in some cases of chorea, 
non-choreatid chorea of moderate severity, insomnia, and 
of excitability bordering on delirium. In two cases of 
very severe chorea, however, acetolalia failed entirely; but 
conium jar in six-dozens doses failed also; chloral 
and bromide of potassium in full doses quickly mitigated 
the severity of the symptoms in both these cases. The 
specimen of tincture of acetolalia obtained without 
seemed to vary in strength. Acetolalia is advertised, 
but the only specimen we have yet been able to find 
somewhat resembled podophylline in appearance, and 
was certainly not an alkaloid.
In the British Medical Journal, vol. 1, 1892, page 1270, F.H. Drake.

That in one case after failure of drugs, the symptom was rapidly relieved by leeching the arms.
In the British Medical Journal, Vol. 11, 1892, p. 1383.

Sir J. A. K. A. Kesteven (Portobello) wrote,

"That in one very obstinate case he found much success after many other remedies had failed.

He prescribed: madder gr. vi., sod. bicarb. gr. viii., magnes. carb. leo. qs.; make a powder, six or one dozen, and take a powder in water every two or three hours while the hermaphroditism."

...it, in small doses, useful in such a case...
In the British Medical Journal, Vol.11, 1892, p.1393.

Dr. J. W. Allen (London N.W.) recommends.

A olei succini per. 3.8. liqueur. potassaej; tinct.
camphor. comp. 3iv; mist. adventice 3ij; aquamthae 1iv.
ad. 3iv; sq. one sixth every two hours. Two

doses usually succeed.
In the British Medical Journal, vol. 11, 1873, p. 1373
Mr. J. de Haviland Hall (Wimpole St. W.) writes,

I would advise R.B. to try pilocarpine (gr. 1/10)
subcutaneously three times a day.

In a case of hicouph which I recently saw with
Mr. A. W. Harrison I suggested pilocarpine, as other
remedies had failed. The hicouph which had been
constant for a fortnight, at once lessened, and
soon ceased entirely.
In the British Medical Journal, Vol. 1, p. 571, 1893
Dr. Charles W. Thorpe (Shandon) writes,

Some years ago having a case of hiccough which resisted all kinds of treatment that are usually recommended, I was led to try cannabis indica, which acted like a charm then and afterwards when the same man had a recurrence of it. I have often used it since, and never found it to fail. I gave the tincture in an emulsion.
In the British Medical Journal, Vol. 1, 1895, page 515.

Dr. H. R. Beevor, M.D., writes,

I have found hicouph lasting two days cease on
administration of one drachm of liquid extract of ergot.
In the British Medical Journal, vol. 1. 1897, p. 703. A member wrote,

In doctor Cooper's severe case of typhoid in which anti-toxin was successfully employed, reported in the British Medical Journal of February 27th, I note that bicarbonate proved very refractory.

May I suggest that the inhalation of oxygen be tried when this symptom proves troublesome? I have once seen great relief by trying bicarbonate preceded by its use.
Dr. E. B. Richardson (West Brighton) writes,

Colonel A., suffering from double aortic disease, came to me in a distressed condition from obstinate hiccup, having suffered 3 days.

I cured him immediately by closing both ears and nostrils with fingers, and making him at the same time swallow a large tumblerful of water.
In the British Medical Journal of March 11th 1879.

A patient aged 50 years of highly nervous temperament suffering from haemorrhoids had them replaced under gas and ether. About two hours after he commenced to breathe.

Pressure on epigastrie region checked it for a short time but it recommenced and continued practically all night, as sleep or awakely the spasm being regular in character, brushing ice was given by the mouth without effect. Borax of ammonia and soda, 1 drachm of each with 20 grains of chloral merely caused the breathing to be slightly less violent during sleep. After consultation injections of morphia were given in quarter grain, and later on half grain doses. These merely gave slight relief during the sleep which followed.

Inhalations of ammonia were next tried with equal want of success; laughing temporarily arrested it. On the night of the ninth day I prescribed 10 minims of a one per cent solution of nitroglycerine with a drachm of Spirit of Chloroform in half an ounce of water to be given every hour. The first dose was taken at 7 p.m. The breathing shortly began to diminish in frequency and violence and at 2 a.m. finally ceased. Whether this satisfactory condition would have resulted from natural causes, it is difficult to say, but apparently, the medicine last used produced the good effect; and as such cases are very troublesome both to the patient and his medical attendant I would suggest the above as a possible remedy.
In the British Medical Journal, March 18th, 1899, T. G. Fell of Blackwood writes:

In 1892 I had under my care a man with catarrhal jaundice whose persistent hiccup refused treatment which extended almost through the gamut of the pharmacopoeia. Even inhalation of chloroform, only checked it when anaesthesia was complete, the spasm of the diaphragm returning unabated at the same time as the conjunctival reflex, and the patient finally died of exhaustion after a week of extreme suffering.

Last month Mr. E, aged 60, during a severe attack of facial palsy, commenced to hiccup so violently that the sound percolated through all parts of the house, and as it persisted in spite of all ordinary remedies, including subcutaneous injections of morphia and atropine, and blisters to the epigastrium and abdominal nerves, and quite prevented sleep, I was forced to give a very gloomy prognosis.

On the morning of the fourth day finding the pulse almost imperceptible and administration by the mouth of half a drachm of pure ether in a little water as a curare stimulant and was delighted to find the hiccup diminish almost immediately. Two similar doses the next two hours cured it completely, and she made an excellent recovery. Both nitroglycerine and ether are classed as antispasmodics but their effects are not due to their depressant action on the respiratory centres is apparent from the failure of the bromides, chloral and other similar drugs to diminish the spasm. May not the singularities that be nature's demand on the vasomotor centre for an increased visceral circulation? If this is the case we ave by the administration of nerve or muscular sedatives and should refrain from giving morphia?
In the British Medical Journal, April 29th 1899, E.W. Simpson of Lincoln, wrote:

A case of violent hicouugh in a young man came under my treatment some years ago. There was no discoverable cause for the hicouugh which lasted for several days.

It was treated by morphine and chloroform and a blister was applied on each side of cervical spine over the region of the third, fourth and fifth cervical nerves in the hope of influencing the phrenic nerves. This stopped the hicouugh in a few hours.
In The Lancet, April 7th, 1853, page 621, J. Weaver writes.

I was called to see Mr. L. on the 18th of December 1852. I found that it was evidently a case of broncho-pneumonia complicated with buccough, the latter arising from some unexplained cause. He told me that he had had buccough more or less since the previous July. He was seen a few days later in consultation, and, although the buccough was very troublesome, our efforts were chiefly directed to the bronchitis, looking upon the former as a troublesome complication which would soon subside. It did not, however, subside, but went steadily on to the day of his death. On the 1st January he was again seen in consultation, and the buccough was so violent and exhausting that our treatment was somewhat reversed by the remedies for buccough being brought to the fore. It, however, never left him. He was conscious save an occasional ranting up to a few hours of his death, and from a state of great mental excitement and anxiety he became perfectly calm and resigned. He slept but very little, and at prolonged intervals during the whole of his illness, never more than two hours at a time, and was often for days without any sleep. Morphia, chloral, bromide of potassium, ether, to only seemed to excite the brain almost to frenzy. The only remedy that did any good in my case was chloroform. I gave it in ten or twenty drops on sugar. I injected it hypodermically with and without alcohol, and my patient inhaled it frequently in twenty to thirty deep doses. Some days before the end the patient would occasionally, with great difficulty, raise some thick, very offensive, pus-like matter streaked with blood.

On March 14th I made a post-mortem examination.
right lung was much enlarged, and filled not only its proper position, but also extended into the left side of the chest, and so peculiar was the formation that the gentleman who assuaged me at the first glance exclaimed that there was only one lung. The left lung was so collapsed and sodden, like liver, and lying so closely at the posterior part of the chest, that it was completely out of sight. In the right lung there was evidence of diffused bronchitis, and on removing the heart and left lung I became aware of a large mass of sarsenus at the root of the latter, in which were embedded the pulmonary veins and arteries, the veins being partially filled up with masses of sarsenus, and the arteries compressed and much smaller than usual. The lung itself was small, hard and repulsed, but had no sarsenus formation on it. On cutting it across a dark offensive matter oozed out, and the inner portion was evidently in the early stage of gangrene, being soft, dark in colour, and highly offensive. The heart was healthy, as were all the other organs, but in the upper and left side of the diaphragm was a patch about three inches in diameter, rough and hard, covered with millet-seed looking bodies. There were also two small bodies on the anterior portion of the liver. The sarsenus tumour would be fairly represented by a medium sized orange somewhat flattened at each side, and was no doubt the cause of hicouphus either by direct irritation of the phrenic nerve or by reflex action of this nerve through the vagus, the latter more probable than the former, for although the mass was in the direct line
of both propositions, yet the phrenic may possibly have escaped by being pushed aside, but the vague must have suffered from the pressure of such a growth. I must leave it to a better pathologist than myself to say how long such a tumour would take to form.
In The Lancet, June 16th, 1853, page 1063.

St. Joseph's Hospital, Birkenhead

Case of Persistent haemorrhage; necropsy; remote fistula

(under the care of Dr. Stevenson)

For the following notes were indebted to Mr. J. Bernstein, M.B., Ed.

Lower surgeon:

Dorothy F. B., aged forty-four, a stonemason, was admitted on May 14th, 1853, suffering from haemorrhage and pain in the lower part of the back and loins. The family history was good generally; but both parents died at the age of fifty-seven, the father being said to have died of 'debility and wasting'. About fifteen years before admission the patient had some acute urinary complaint; two years before had erysipelas of face after being exposed to the cold and wet. During the intervals and until three weeks before admission he had enjoyed good health, except that he had been losing weight. About April 28th, he was seized with a pain in the lumbar region of the spine. The pain gradually spread round to the loins and epigastrium, so that he had to give up work on May 11th. On the 14th, he began to be troubled with haemorrhage, the urine became scanty and thick.

After admission the patient lay in bed on his right side and haemorrhaged with scarcely an intermission. His complexion was pale, skin moist; temperature normal. The thorax on examination presented no abnormally. The pulse was 80, firm and regular, tongue white and moist; abdomen distended and tympanitic; liver dulness normal. There was considerable tenderness all over the abdomen, but more particularly over the ileac region.

The bowels had been constipated since the 14th. Bernstein
some amount of typhus fever. Trembling of the hands was very violent, but could be controlled—on the 25th he was slightly delirious. The headache was continuous till the 28th. The temperature was normal, pulse regular. On the 29th, after the administration of a purgative and fifteen drops of rectified spirit of turpentine, the headache was relieved, though on the following day it was as bad as ever, and the patient was delirious during the night. He died next morning on the 31st.

Necropsy. The body was extremely emaciated. Throat: The pericardium was completely adherent to the heart, and could only be torn off, with difficulty. The heart was extremely small; the muscular substance being soft and friable, but the valves normal. The upper lobes of the lungs were firmly attached to the chest wall by old pleuritic adhesions. At the apex of the right lung there was the appearance of a small pus cavity which had been opened in leaving the lung out. The substance of the lung was fairly translucent, but was studded all over with hard caseous nodules about the size of peas, some much larger. At the root of each lung, surrounding the bronchus, were large caseous masses, thicker on the right and two on the left side, about the size of almond nuts.

In the abdomen nothing abnormal was observed, excepting that there was little or no fat in the walls or in theomentum. The aorta was quite normal in calibre and substance.

Remarks. The first remarkable point in this case is the almost complete absence of physical signs, and of symptoms that would tend to reveal the true nature of the case. The absence of the former is sufficiently explained by the
condition of the lungs as they were seen at the dissection. Where there was quite enough healthy lung tissue to carry on the respiratory function, the small cavernous nodules scattered all over would scarcely be recognised by any physical examination. Indeed we can scarcely consider the condition of the lungs to have been the immediate cause of death. The emaciation came on only at a late stage of the disease, so that we may justly consider the hicoufthead, which was so prominent and persistent a symptom in the case as it came under observation, was intimately connected with the fatal determination, must, indeed, by its exhaustive effect on the patient have been the immediate cause of death; and we also consider that the unusual presence of the large cavernous masses at the root of each lung, by implicating either the phrenic nerve in front or the vagus behind, may have in some way produced this most unusual symptom of hicoufthead. It is also noteworthy that the only remedy (and many were tried) that had any effect at all on the hicoufthead was a strong purgative.
In the year 1855, page 276, R. Bonar writes,

The following record of the therapeutic action of ergot may not be uninteresting.

Everyone, of course, is acquainted with the action of ergot on the uterus, its advantage in menorrhagia is also well known. I have used the liquid extract of ergot with great benefit in haemoptysis and epistaxis. Recently my assistant surgeon had a pet dog which bled from the nose during the excessive heat of June. I have often met with cases of epistaxis in dogs of European breeds in India during that month. The assistant surgeon asked me if I knew of anything which would stop it. I said, "Try the liquid extract of ergot." The next morning he said, "Thank you, Sir; the ergot quite stopped the bleeding," and I think the dog will get well now." Very few, however, may have heard that ergot will cure bicorn. Last autumn there was in this district an extensive epidemic of intermittent fever. The police hospital was full of fever cases. One day a policeman was admitted with an obstinate bicorn. He said he had had it for some days and had no other ailment. I tried many remedies—sedatives, narcotics, antiphlogistics, and counterirritants. I examined his body, to see whether there might not be some latent bicorn in any part which might be the cause of it, but found nothing. I gave him a large antiphlogistic enema, and then a strong purgative. The bicorn went off. I next tried chloroform and subcutaneous injections. As long as these effects lasted, freedom from the distressing spasm was experienced. Then it came on again with unabated force. The patient began rejecting his food and everything he tried by the mouth. The case was taking a
serous aspect, and I thought death would ensue—by a last
measure I ordered the liquid extract of ergot in drachm doses.
I did this simply because I knew it had a decided action on
mucous fibrin. The first dose modulated the spasm, the second
did further good, and the third or fourth stopped it altogether.
The patient had some rest, but little in the morning returned.
Three or four doses stopped it again; it never returned, and the
man was well. Recently another case was admitted with a
similar constitutional history. My hospital assistant gave the
liquid extract of ergot at once; after some doses the cough was stopped,
and did not return. I have often given this extract in drachm
doses frequently repeated, and have never observed any disadvantages
from it. As to the cause of this idiopathic bronchitis, I think
it was a chill. It was the season of hot days and cold
nights, with heavy dew—natives are fond of sitting out in
the chilling wind; almost all of them get fever; the policeman
spoke of getting a bad bronchitis instead. A chill at one
season may give bronchitis or pneumonia; at another it
may give fever or produce some other reflex disturbance;
at a third it may produce diarrhoea or dysentery; and, I
believe, even an attack of cholera may be caused by a simple
chill, other things being favourable.

This paper appeared originally in the Indian Medical Gazette
May 1885 by the Assistant Surgeon Mr Ratton Barergi of the
Etrum Police Hospital.
In The Lancet, Sep. 5th 1855, page 465, Dr. T. P. wrote,

Having within the last three months occasionally broken the rule to which I had faithfully adhered for a long time, I have experienced some very unpleasant symptoms, which I certainly believe to be due to tobacco - on several occasions, and that during the act of smoking or shortly after, I have been seized with an uncontrolable and persistent hicouough, a thing to which I never remember having been subject.

On the evening of August 29th I had one of the worst of these attacks of hiccough, and that night, shortly after going to bed, I was awaked by what I took to be my own loud cry or shriek (not being dreaming at the time) and immediately experienced a sense of suffocation which soon passed off.
In the *Lancet*, Feb. 16, 1895.

A prolonged case of hiccup

By D. Ferguson, M.R.C.P., L.R.C.P. Edin.

The patient was a man about thirty-three years of age who had been suffering from hiccup for about twenty-four hours before I first saw him. He was robust and in good general health, but perhaps rather thin; he had no pain, gastric derangement, or flatulence; he did not vomit and his bowels acted freely. His urine contained no albumen or sugar; his skin and conjunctivae had a faint yellow tinge. Physical examination revealed no abnormality except slight hepatic enlargement. His own opinion was that there was nothing the matter with him except the hiccup. He was a total abstainer and had been one for years. In the hope that a sudden and unexpected shock might break the habit of the spasmodic action of the diaphragm a large piece of ice was without previous warning applied to his spine, but no benefit was obtained. Aromatic spirits of ammonia, ether, and pressure on the carotids were similarly ineffective. Thirty grains of chloral hydrate were then given, after which he immediately fell into a deep lasting about two hours, but the hiccup continued throughout as before. Shots of ergotin were then given, followed by chloroform and injection of opium internally; while hot fomentations with turpentine were applied to the epigastrium. No relief being obtained I injected half a grain of morphia hypodermically. At my next visit I found him decidedly worse. He looked pale, worn out
and depilated. The morphia had not produced sleep. With every
spasm his whole body shook convulsively, even the muscles of
his neck quivering; and his face was for the first time slightly
conversed. Previously he had been taking nourishment freely, but
during the last few hours all food was rejected. On the administration
of chloroform the hiccup ceased, but the inhalation was discontinued
after a quarter of an hour on account of the shallowness of his
respirations, and in less than an hour the hiccup was as bad
as ever. At my next visit I was accompanied by a medical
friend, no sooner had we entered the patients room than the
hiccup ceased, nor did it return during the ten minutes or so
that we remained there; but it returned with unabated severity
on our departure. Probably the arrival of two medical men
agitated the patient and acted on him as a temporary counter-
indical. In accordance with my friends suggestion I endeavoured
to administer tincture of belladonna in combination with aromatic
spirit of ammoniac; but the mere sight of the medicine produced
painful retching. I therefore again injected half a grain of morphia
under the skin of the arm and used chloroform inhalation.

The morphia caused drowsiness, but no sleep, and although the
hiccup ceased while the chloroform was being given it
returned in all its former severity as soon as the unconsciousness
passed off. The patient was seen to be in a critical state,
no nourishment of any sort had been taken for many hours,
and the cyanosis was intense, while the hiccup was continuous
and violent. I then sought the advice of three friends of
hospital experience to whom I described the case. They
recommended the successive trial in the following order of
(1) me to the phrenics, (2) galvanism to the same region, (3) dry tapping to the lungs in the chance that there might be latent kidney mischief, (4) dracon doses of subnuxtaph of bismuth; and (5) the prolonged inhalation of chloroform short of producing narcosis. It was impossible for the patient to swallow the bismuth, and the chloroform had been pushed as far as I was disposed to venture. The other recommendations were carried out, but did not produce the slightest apparent benefit.

As a last resource I then injected below the skin of the arm six minims of a solution containing one-sixth of a grain of aperic and half a grain of morphia. The dose was large certainly, but the same quantity of morphia had already been injected without producing any further effect than a little drowsiness. In five minutes the patient was fast asleep, and the hoarseness had entirely ceased. In rather less than two hours I returned in response to an urgent summons and found his face cyanosed, his lips particularly blue, and his breathing stertorous, and too slow and laboured that he seemed to be on the point of suffocation. There was however no clamy or cyanosis, and the pulse was comparatively strong, slow and regular; the pupils were slightly dilated and quite insensible to light. He could not be awakened by slapping the face with wet towels, shouting into the ears or applying galvanism to the temples, but tickling the soles of the feet made him start so violently that he required sufficient consciousness to answer a few questions and swallow a little coffee. He was allowed
he fell asleep once more, but in about an hour his breathing became so much obstructed that he was again awakened, this time with far less difficulty than before. He talked for a few minutes quite rationally, drank some beef tea and fell asleep again. Next morning he complained of nothing except some stiffness of the neck and difficulty in swallowing. There was no return of the hectic which had lasted for seventy-two hours without cessation except during the short periods while he was under chloroform and while he was visited by my medical friend and myself together. His subsequent improvement was rapid, and in a few days he regained his normal condition.
In the *Lancet*, May 14th 1895, J. Edward Holse, Kuantan,
Pahang, writes.

"Ole ofouchirth is as a cure for hucouch, mentioned
in "Faqee Practice of medicine. I used it a few
years ago in a case which had lasted nearly two
days, and it yielded at once to a twenty dose drop."
In The Lancet, June 1st 1895, p. 1363, Dr. Wightman writes:

I have thought it worth while to bring forward the notes of this case on account of its comparative rarity, and also because textbooks and even books of reference are silent, or tell one little, as regards the treatment of the complaint. In the following case anaemia, the passage of the gall stones, or implication of the diaphragm, inflammatory or otherwise, could be excluded. Nor was there any evidence of implication of the phrenic nerves in the thorax or neck. There were no signs of intra-thoracic or intra-abdominal growth or a neoplasm. There was no evidence of intra-cranial mischief. There was however a history that made one suspicious that the attack might have been neurotic. About six years ago the patient had much mental worry and disappointment. Soon after, with fairly long intervals between, he has had, what he called 'fainting attacks'. His description of them was that, whilst thinking deeply on any subject, another intruded itself, the two getting mixed up together; then something seemed to focus in the epigastrium, and gradually rise up towards his head, whereupon he lost consciousness. Bystanders who had seen him in an attack said that he turned pale, slid down off his chair on to the floor, his eyes being widely open, his hands were flexed at the wrists, there was no struggling, and the attacks lasted a few minutes. Small spots due to cuts on the head and chin were visible; these being due to injuries received by falling during an attack some years ago. He never lost his tongue or passed urine or feces. There had been two previous attacks of hiccough, each attack lasting a few hours.
A man aged fifty eight first came under my notice on March 15th 1895. He was a total abstainer, but was in the habit of drinking much tea. He had smoked half an ounce of tobacco per day for 25 years, and was a very small eater. He stated that he had had constant hiccup for forty eight hours—I prescribed him chloral hydrate, gr. xx, and bromide of potassium, gr. xxx in a draught at bedtime. On the following day he had five hours' sleep, but the hiccup recommenced in his waking. I now gave him chloral hydrate, gr. xxx, bromide of potassium, 1 dr. with water to two ounces--half at three p.m. and the remainder at bed time. Pressure over the region of the phrenic at the lower and front part of the neck stopped the hiccup for a short time. On the 16th he had a quiet night on the whole. The hiccup was worse in the morning. There were violent and frequent contractions of the diaphragm, frequently the hiccup being represented by five or six consecutive contractions. The hiccup occurred eight or ten times in a minute, sometimes more frequently. The pulse was good and regular, but the tension was high, and the arteries were thickened. The temperature was normal. The face was flushed. There was no vomiting. Pressure over the phrenics had no effect. The urine was of sp. gr. 1025 and contained no albumen or sugar, a normal quantity being passed. A blister three inches square was ordered to be applied over the region of the diaphragm on the front, as well as to the nape of the neck and spine. At 8.30 p.m. the hiccup was still violent. The temperature was 100° F. and the pulse 64. The following was prescribed: chloral hydrate, gr. xx, bromide of potassium, gr. xx, to be taken immediately. As soon as the effect
of the straughter had occurred he was to have spirit of camphor
vom., xxx, extract of belladonna, dr. t. bromide of potassium
gr. xxx, with water to four ounces, one ounce to be taken every three
hours. On the 31st the hiccough was still severe and frequent.
He had had a bad night, talking in his sleep which had been
much interrupted. He failed to pass well. The temperature
was normal and the pulse by. The lungs were natural as
was also the urine. A quantity of warm fluid into the mouth
took place during the early part of the afternoon; after this
he had two hours sleep. The hiccup was now violent. He
was ordered sulphate of zinc gr. xxx, with water to one ounce
to be taken immediately. At 10.30 p.m. the emetic caused
vomiting only. One fifth of a grain of morphia was injected
hypodermically. On the 32nd he went to sleep after an
injection of morphia. Neurotic breathing came on, which
alarmed his attendants for a time. He slept nearly all night,
but hiccup persisted throughout. The pulse was regular, the
specific gravity of the urine was 1023. He was prescribed mud
powders (one grain) every two hours. At 5 p.m. the hiccup
became quite as frequently as before and was of a similar
character. The patient complained of sore throat at times.
Nebulization of amyl nitrite was tried, but had no effect. He
now took nourishment well and was passing a full quantity of
urine which contained ten grains of urea to one ounce, but no sugar.
At 1 p.m. he was rather exhausted. A hypodermic injection of
one seventh of a grain of morphia was given. On the 33rd
he had no sleep until 5 a.m. He was light-headed and talked
a good deal during the night. He was now taking milk or
weak tea with light food and half an ounce of brandy every
four hours. The pulse was 80 and regular. The face and
the conjunctiva were somewhat jaundiced. There was no
headache or vomiting. The examination of the chest proved
to be negative, except that rhonchi and rales were heard
at the left base behind. There was some cough and
expectoration. The heart's apex beat was situated at the
fifth intercostal, half an inch inside the nipple line. There was
no distention of the abdomen, and no perceptible enlargement
of the liver. Liver dulness appeared to be normal. Peristalsis
resistance was normal. The urine was rather dark but did
not contain bile pigment. The faces were hard and of a
dark colour. At 9.30 p.m. he was given bromide dr. 1,
with water to one ounce, to be taken at once as a draught.
On the 26th he had not much sleep. The pulse was 62.
He had some cough. The lycorhagia had been very severe
during the previous night, worse than before. He had, however,
taken food well. Dr. Walter H. Jordan of Birmingham
kindly saw the patient in consultation with me, and the
following medicine was tried: ammoniacal hlarvoleum of valerian
dr. vi.; bromide of potashum, dr. ii.; chloral hydrate, gr. xii.
with water to one ounce, one ounce to be taken every four hours.
On the 29th he had two hours sleep during which time the
lycorhagia stopped, but recommenced on his waking. He had a
good breakfast. At 6.30 p.m. I was sent for because the patient
was "not himself," delirious and drawry, these symptoms apparently
coming on suddenly after a repose motion at midday. The
patient was now very drawry and talking nonsense; his face
was flushed; he could however be removed, and then complained of severe, severe pain at the epigastric level. The pulse was steady, the tension being low. The hiccup was severe. He also complained of a tingling sensation over the chest and arms. The medicine was ordered to be stopped and hot coffee to be given. At 10 p.m. he was much less distressed. The skin was hot, the temperature being normal. The epigastric pain had gone On the 26th about midnight he tried to get out of bed. Another dose of bromide and chloral was given, although contrary to orders. He slept for six hours without hiccough.

In the morning the patient seemed to be better. The pulse was steady and the bowels were opened. He had a good breakfast, although was still frequent. The following was prescribed:

chloral hydrate, gr x. bromide of potassium gr xv. and water to one ounce to be taken at 8 a.m. At 9.30 p.m. after the draught he slept for five hours. He took food well but the cough was troublesome. The pulse was good. The sputum was of the 10:30 and contained no albumen. On the 27th he had a good night. For the first time since the onset of the illness, eleven days previously, he was free from hiccough whilst awake. The pulse was rather weak but regular and not hurried.

We woke up suddenly in the night, startled, and coughed much for a short time. Brandy was increased to one ounce every four hours. Expectorant medicine was administered. At 9.30 p.m. the hiccup had returned, being frequent, but not very severe. Otherwise the patient's condition was satisfactory, though he felt weak. The pulse was stronger. The draught as given on March 30th was repeated. On the 38th the patient took
In the British Medical Journal, April 29th 1899.

Harold Gurney, Dovercourt

In the summer of 1894 a gentleman aged about 30 came to my house in the middle of the night accompanied by a friend. I could distinctly hear down my opeating tube a loud noise like the barking of a dog, the noise proving subsequently to be emanating from my patient who was in a most exhausted and distressed condition from the violence of the seizure. He was quite unable to speak, and his friend informed me that he had had several previous attacks and had been prescibed various drugs including prolonged chloroform alone and hypodermic injections of morphia.

I gave him a draught of oil of turpentine in a little mustard and it acted like a charm. All symptoms disappeared immediately, and he was not troubled again during the few days he was under my notice. The man was a summer visitor and I have not heard of him again. He assured me he would never be without oil of turpentine in the house. The simplicity and effectiveness of the remedy appeared to me to make the case worth recording.
In the British Medical Journal, April 29th, 1899,

W. Bazeley Thorp, Upper Brook Street, says

'Some 8 years ago I treated a lady between 30 and 40 years of age for a violent headache which sometimes once or twice repeated and recurring at varying intervals made it almost impossible for her to mix in society.

The digestion by a diet regimen, and various internal remedies were tried but without result. Nerve sedatives were no more efficacious.

At length I prescribed tablets of an hundredth of a grain of Nitroglycerine to be taken two or three times a day, and in addition every time the condition threatened to recur.

The effect was immediate and the malady was subdued in about a fortnight. Two years later there had been no recurrence.'
A. Williams, of said Peddibridge, wrote an obituary in the British Medical Journal, June 3rd, 1879.

In his hands were the forces of his papers extensively developed. In his mind, only that of his friend, Mr. Halls, of said Peddibridge, wrote an obituary in the British Medical Journal, June 3rd, 1879.

My friend Mr. Halls, of said Peddibridge, wrote an obituary in the British Medical Journal, June 3rd, 1879.

Of his own knowledge of the forces of his papers extensively developed, this

In his words, only that of his friend, Mr. Halls, of said Peddibridge, wrote an obituary in the British Medical Journal, June 3rd, 1879.
In the British Medical Journal of September 30th 1899 Arthur Russell of Kalam, Chamar.

In a case of hiccough after operation. The patient was a musclemen aged 35. On November 14th 1894 I performed lithotomy under chloroform. While still on the table and semi-conscious the patient began a violent hiccough which continued with 5 to 7 minutes interval for 15 days.

No treatment had the slightest effect except morphia in doses large enough to produce narcosis during which the hiccough continued still, though at longer intervals — antispasmodics, nicotine, emetics, purgatives, counter irritation to the epigastrium and over the phrenic nerve and neck, in fact every kind of treatment described in text books proved useless — no cause whatever could be detected for the hiccough. The wound was healing satisfactorily, but the patient became greatly emaciated, and it seemed that the life would be pressed out of him, when on November 29th the hiccough stopped as suddenly and as unaccountably as it began. He had taken a dose of chloral hydrate previously, but in no way attributed his cure to that drug. I met him a few months ago. He said he had not since been troubled by hiccough.
In the British Medical Journal, October 21st, 1899,

George Rent of Upper Gloucester Place writes,

From time to time cases of bronchial are recorded
for which a great variety of remedies have been tried
and found useless.

I do not remember to have noticed a punch of good
Scotch snuff mentioned in the list. The use of steam
rattles is no new idea. It is as old as Hippocrates
who said "sneezing was good for the hiccough" (see
Thomas Brown's Vulgar Errors, Chapter IX)
LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, T. A. Barron, M.R.C.S., L.R.C.P., London, W. 11, at the rate of 7s. 6d. per line, and delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 26, Mincing Lane, E.C. 4.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be written in accordance with the regulations in the JOURNAL, unless otherwise stated.

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Correspondents who wish to be taken of their communications should not underline their names—at cost of 6d. each for publication.

Authors are requested not to look at the Notes to Correspondents printed in the JOURNAL.

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TELEGRAPHIC ADDRESS—The Telegraphic address of the Manager of the B.M.J. is Adelphi, London. The telegraphic address of the Manager of the B.M.J. is Adelphi, London.

LETTERS, NOTES, Etc.

FEAR QUERIES, answers, and communications relating to subjects to which special departments of the British Medical Journal are devoted will be found under their respective headings.

QUERIES.

X. Y. Z. asks for suggestions in the treatment of a case of interosseous neuritis, following shingles, in a lady aged 67. He has tried the usual remedies, and has had the nerve excised in two interosseal spaces.

GUNSHOT HEADACHE.

Sportsman will be thankful for any advice or hint as to the best treatment for "gunshot headache." A piece of indiarubber hold between the teeth has been tried with some benefit. The pain comes on after the second or third shot.

TREATING OF FEELING NOSTALGIC YOUTH

B. H. (Yorkshire) desires to hear of any institution for the training and teaching of girls with a somewhat deficient mental capacity.

If the youth can be certified as "imbecile," the Royal Albert Asylum, Lancaster, would be a suitable institution. Particulars could be obtained from the Secretary, Mr. J. Diggins, if only slightly deficient, applications might be made to Miss Dendy (Honorary Secretary Lancashire and Cheshire Association for Care of Feebleminded), 13, Clarence Road, Withington, Manchester.

INCOME TAX

C. P. C. writes: I lately informed the Income Tax assessor that I was going to appeal against my assessment, and sent up a list of deductions which I always understood were allowed. He wrote back: "Rent, taxes, etc., are not permissible deductions from a physician's income." I should be very glad of any information on this important matter. I believe medical men usually deduct one-third or one-half of their rent and taxes in cases where they practise their profession in their dwelling houses.

The Inland Revenue have referred the query to the Income Tax Repayment Agency, 4, Chichester Road, W. They reply: "The surveyor of taxes is unanswerably wrong; the only tax not a permissible deduction is income tax. C.P.C. should deduct two-thirds of rent, rates, and taxes. The Agency ask whether he will give them the name of the district in which the surveyor acts.

ANSWERS.

PUZZLED.—There is no known parasite of man which could produce such results.

Vindicated! We could not publish the letter without the signature of the writer.


LETTERS, NOTES, Etc.

THE DUFFERIN HOSPITALS FOR INDIA.

We have received a letter from a lady who signs herself, "M. D. late Dufferin Hospital, Bengal," whom we cordially invite to liberty to publish, but the gist of her communication is that the reason for the non-success of the Indian hospitals for pulmonary tuberculosis is largely to be found, not in the admission of women of lower class, but in the fact that the Indian rural hospitals, whether public or private, are not capable of undertaking serious surgical work. It can hardly be expected, she adds, that a lay association should appreciate the fact that the mere passing of an examination does not make all those who pass equally capable of important surgical work. The admission of medical women to the Council of the Dufferin Association is, she considers, urgently called for in the interests, not only of chivalry of these medical women, but of the patients of the Dufferin Association.

DIARY FOR NEXT WEEK.

MONDAY.

Otolological Society of the United Kingdom, 17, Chandos Street, Cavendish Square, W. (@). A meeting will be held at 3 p.m. Speeches will be made by Mr. A. W. C. Douglas, Dr. C. E. Hodge, Dr. D. M. H. Martin, Mr. C. E. A. Smith, Mr. F. J. H. Clay, Mr. R. E. Bell, Mr. C. E. A. Smith, Mr. A. W. C. Douglas, Mr. R. E. Bell, Mr. C. E. A. Smith, Mr. A. W. C. Douglas.

WEDNESDAY.

Obstetrical Society of London, 20, Hanover Square, W. 6 p.m.—Speakers will be Dr. J. F. C. Gailey, Mr. A. W. C. Douglas, Mr. A. W. C. Douglas, Mr. A. W. C. Douglas, Mr. A. W. C. Douglas, Mr. A. W. C. Douglas, Mr. A. W. C. Douglas, Mr. A. W. C. Douglas, Mr. A. W. C. Douglas.

FRIDAY.

West London Medico-Chirurgical Society, 26, Mincing Lane, E.C., 3.30 p.m.—Clinical Meeting.—Mr. K. G. Martin, Dr. S. M. Taylor, Mr. S. M. Taylor, Mr. S. M. Taylor.

West Kent Medico-Chirurgical Society, Royal Infirmary, Gravesend, 3 p.m.—Lecture on the prevention of tetanus. Observations of the Prevention of Tetanus.

POST-GRADUATE COURSES AND CONFERENCES.

Charing Cross Hospital, Hospital Road, Thursday, 7.30 p.m.—Demonstration of Surgical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, Wednesday, 7.30 p.m.—Demonstration of Chest Cases.

London Hospital, 194, Great Portland Street, W., Thursday, 7.45 p.m.—Lecture on the treatment of pulmonary tuberculosis.

London Hospital, 194, Great Portland Street, W., Thursday, 7.45 p.m.—Practical demonstration of the treatment of pulmonary tuberculosis.

Medical Graduates' College and Polyclinic, 23, Charing Cross Road, W.—Demonstration will be given on Saturday morning, 8.30 a.m., and on the evening of Saturday, Thursday evening; Saturday afternoon; Friday, Thursday.

National Hospital for Nervous Diseases and Epilepsy, Queen Square, W.—Thursday, 3.30 p.m.—Lecture: Surgery of Nervous System.

West London Hospital, Hampstead Road, W.—Lectures will be delivered at 8.30 p.m. as follows: Monday—Muscles in Dental Operations. Tuesday—Medical, Surgical, and Dental Anatomy. Surgery. Anatomy. Thursday—Uterine Hemorrhages. Friday—Skin Cases.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded to post-office orders or stamps with the notice and later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

Potts.—On November 21st, at 90, Hagley Road, Moseley, Birmingham, the wife of W. A. Potts, M.B., of a son.

MARRIAGES.

Lawrence—Brown.—On November 26th, at St. Peter's, Forest Gate, Essex, the Rev. F. D. Pott, assisted by the Rev. C. G. Ecuyer and the Rev. P. H. Busk, Hurley (Eng.).

Morgan—Morgan.—On November 20th, at 18, Montpelier Road, Regent's Park, the Rev. Mr. M. J. Morley, assisted by the Rev. Mr. M. J. Morley, of the Parish Church, Chester, and by the Rev. Mr. M. J. Morley, assisted by the Rev. Mr. M. J. Morley, of the Parish Church, Chester, and by the Rev. Mr. M. J. Morley, assisted by the Rev. Mr. M. J. Morley, of the Parish Church, Chester.

Moir—Dowson.—On November 20th, at St. James's, Caxton, Middlesex, by the Rev. Mr. M. J. Morley, assisted by the Rev. Mr. M. J. Morley, assisted by the Rev. Mr. M. J. Morley, assisted by the Rev. Mr. M. J. Morley, assisted by the Rev. Mr. M. J. Morley, assisted by the Rev. Mr. M. J. Morley, assisted by the Rev. Mr. M. J. Morley, assisted by the Rev. Mr. M. J. Morley, assisted by the Rev. Mr. M. J. Morley.

DEATHS.

Aspinall.—On November 20th, at St. Boodle's Hospital, Headington, by Dr. C. W. B. Doherty, M.D., B.D., and Mrs. E. B. Doherty.
LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, L. A. E. G. (London), and those concerning business matters, to the Manager, L. A. E. (London). Correspondents are requested to include a stamped, addressed envelope with their communications to the Manager.

ARTICLES AND LETTERS forwarded for publication are understood to be offered to the British Medical Journal alone, unless the contrary is stated.

Queries.

MEDICAL TREATMENT IN INFANCY.

I. J. asks: How long might one with safety continue hyd. acetae in a gravida daily to an infant aged 1 year, who shows no sign of herid. atopy, and who has been treated with this since birth, and is undergoing a general examination of the body, including skin tests and nasal polyps, and being thoroughly treated for it, but desires the child to be treated as though it were constipated, as well as for a cough of several months' duration? Would this treatment be likely to delay dentition?

VACCINATION BY CIVIL SURGEONS.

R. M. asks: Is it considered that he is entitled to vaccination fees under the acts of 1846 and 1850, being a Civil Surgeon and in charge of a military hospital, and amongst his duties are to vaccinate soldiers' children? He wishes to know whether he can be paid, if so, how much?

DENTAL TREATMENT.

A. M. asks: Whether he is entitled to give certificates to pauper patients exempting them from attendance on school or on account of sickness? (2) Ought not the school board to pay for the medical treatment he gives to pauper children?

SCHOOL, BOARDS AND MEDICAL CERTIFICATES.

E. M. asks: What is the duty of a school medical officer to do in the case of a pupil who has experienced fever, and is he entitled to give certificates to pauper patients exempting them from school or on account of sickness?

THROMBOSIS AFTER VAGINAL OPERATION.

W. T. asks: Some three years ago a young lady had an ovary (cystic) removed, and a portion of the abdominal wall. She is now pregnant for the first time. She has some pain in her upper left side and some tenderness to the vagina, but no discharge is noticed. What is the treatment, if any, that ought to be adopted at the commencement of pregnancy to prevent rupture or necrosis at the site?

There is little or no danger of rupture of the vaginal scar. It is more likely abortion, premature labour, or pain in the later stages of pregnancy will occur through dragging of the pedicle more or less adherent to the uterine tissue.

INCOME-TAX REMITTANCE.

A. P. has asked as remittance: (i) Accident insurance premium on which is used for the practice only. (2) Insurance premium on which is used for the practice only. (3) One-third of total rates and taxes of dwelling-house, standing, and lying in a fair proportion to put on the property portion of the remittance is paid. The total amount of the medical officer's income, excluding medical fees and other income, is £200. The first three items are not allowed, and "insofto" desires a further opinion on the matter. The last item is allowed as Admissible and an opinion as to whether the rate for this item is admissible and fair.

"Life insurance premiums cannot be deducted as a professional charge, but can be claimed either as a deduction on the assessment, or remittance, as the practice is annual, and not an investment on which income is applicable to the death risk. Insurance premiums on any kind belonging to professional items are, of course, admissible deductions. As to rates and taxes, they should be allowed in the same proportion as the business which makes the income. The practice would be a better judge than a surgeon of taxes, as to what cleaning, lighting, etc., of a surgery cost him, but this a month appears inadequate.

We advised that judging from the questions asked, which are most obvious, the "insofto" does not know what deductions he has the right to make, and it may be wise to submit his accounts to an expert in this.

ANSWERS.

C. M. B. Dr. George M. Gould's Illustrated Dictionary, Biology and Allied Science, London: Butterworth and Cox, 1909 will fulfill our correspondent's requirements.


N. M.—(1) We believe that one important method of combating the plague of the tropics is in the greatest attention to the skin, apoplectic, and other causes of rubella, particularly animal rubella; (2) the cylindrical copper or copper-silver core comes in the best advice to the local physician who can associated with his assistance by Messrs. Ewart and Sons, 26 to 309, Euston Road, N.W.

TREATMENT OF ECZEMA.

B. R. Farnes (London) writes in answer to questions from F. R. C. S. I. and Medecine, in the British Medical Journal of December 7th, p. 1116: Eczema is in all probability symptomatic, and, if we do not take out a special course unless he is well up in the book, and allow for alcohol, should be discontinued during the eruption. Internal medicinal aided by regular use of salines—e.g., 30 g. Carbarsal salt every morning, and the cutaneous circulation promoted by a daily prolonged bath (40 to 60 minutes) in water at an indifferent temperature (90° F.). A small dose of sulphur every night for one or two months is also often helpful.

D. G. Norman, M.A., M.R.C. (London) also writes: Recurring eczema of the type described is frequently associated with the "puffy diathesis." "F. R. C. S. I. might employ a modification of Lassé's paste: Acid. salicylicum 16.0, cinnamomum 4.0, and the burning of the hands and face is relieved. The disease is not relieved by the use of soaps, and the patient may be employed instead, especially for the hands and face. An ointment of equal parts of the radix and ungu. plumb. sub. of H. F. E. g. of the mixture is to be applied to the affected area, in the form of a suit of cannon, especially at night. The urines should be examined for sugar.

THE EXAMINATION OF BLOOD. M. D. B. P. J. H. R. asks what are the means of examining for sugar in the blood of a man, and whether a candidate who has been some years in practice can be examined for the F. R. C. S. I. Examination? We are informed that no other books are required than the ordinary manuals in use for the professional examinations in this country. It would be better for a candidate who has been some years in practice to take this examination as well as the practice of his profession. A candidate ought at least to feel able to pass an examination like that of the Joint Board if he wishes to proceed to Brussels with confidence.

LOCAL TREATMENT OF MALIGNANT GROWTHS.

Dr. Heberden in a recent editorial in the British Medical Journal says: "If someone discovered a particularly painless sarcoma, the stick persicaria holds the foremost place as an application to localized malignant growths of limbs and other parts. It burns, but it is a real help, and all pain ceases immediately water is brought into contact with the part, caustic action being of no consequence. It is to be used with a splint or bandage which is to be of a mild and far from painless sarcoma. The same, he thinks, may be said of the latest "cancer cure"— the Roentgen rays.'

LETTERS, NOTES, ETC.

DURHAM UNIVERSITY MEDICAL GRADUATES ASSOCIATION.

D. T. Gutterson Wood (45, Margaret Street, London, W.) writes: The courteous letter of Dr. Ronald Daniel in your last issue is greatly appreciated by the Executive of the Association, and in deference to the wish of our President I beg you will permit me through the medium of your columns to assure him that I was through no accident or neglect or negligence that the Members of the Association are steadily increasing in numbers and there is no want of spirits for these among them. We number now about two hundred, and the Association is highly represented in the Senate of the University, where all matters connected with the medical faculty are kept well to the front. We trust that this Association, as it is known to fellow graduates who have not yet joined us, will show what an excellent work we are doing at headquarters and how desirable it is for our friends at home and abroad to keep in touch with our efforts as successful in the future as they have been in the past.

OSSITIN HIGGECROtt.

H. E. F. Ernest Higginbotham (Kelby Hospital) writes: Dr. H. E. F. Ernest Higginbotham of obstetrics, London, writes: "A letter I received from a medical student on November 30th, 1909, p. 165) brings to my mind a somewhat similar case seven years ago. I was called the same day and found the patient to be in a very serious condition. The patient had had no previous days illness." He had that morning been seen with the most violent eczema. The paroxysms were so severe the patient almost passed away; it was treated almost alone and in combination with all the usual sedatives, but with negative results, whilst artificial care was bestowed on his diet and exercise functions of the case, and his skin was constantly kept clean. That the state of the sufferer was becoming serious, the exhaustion
being most remarkable. At this time I decided to try a pill containing pinn leaf-bud extract, milled in combination with solid opium. I was unable to take it all in at once, but the condition had not returned since, and as I have lately heard from the patient. He was a great eater and drinker, and was neglected as to his exercises. His condition of health was never as good as it has been since the introduction of the above medicine, and the success is due, in my opinion, to the use of this medicine, and the success is due, in my opinion, to the use of this medicine.

Dr. Percy McDougall (Pittsburgh, Manchester) wrote: In my experience a few drops of oil of cajuput, taken on a lump of sugar, rapidly put an end to an attack of hiccup.

THE CAUSE AND TREATMENT OF SEA-SICKNESS.

We have received from Dr. C. Rutland Savory (Leeds) a communication in which he refers to the points raised in the correspondence on seasickness which was initiated by his letter of March 9th. He writes:

The sickness of passengers in the first instance is known as seasickness, occurring through the primary action of other than the stomach; and I look upon seasickness as being a sympathetic action of the digestive organs, occurring through a disturbance primarily of the semicircular canals. Nausea on the ship is often due so I believe, to the peculiar reaction of the patient on the blind patient on board, and he has suffered from all the symptoms of the condition.

Mr. J. F. Elliott (Natal) writes that he believes, from an experience of nearly five years as a ship's surgeon, that the secondary actions of the liver and kidneys are often different from those of the primary, owing to the mechanical disturbance of the body. In some cases the disturbance affects chiefly the digestive organs, and in those a single cut with an emetic may suffice. A violent hemorrhage, a continuance of the patient should be urged to remain erect or in the sitting posture, if possible. The act of vomiting, if the object is to produce a darkened fluid or the blinding of the patient, with some nerve sedatives, are useful measures. He refers to attacks of diarrhoea as a result of the mechanical disturbance of the intestines.

Dr. John Higgin (Dundee) writes in support of the value of ammonium bromide. He has recently had experience in treating the malady on board the London and New York mail steamer, where the course of the disease was successfully treated by the administration of an older pill followed, at bed time, by 5 gr. of ammonium bromide.

THE ACTION OF LODES ON THE HEART AND CIRCULATION.

Dr. Gordon Board (Leeds) writes: It is interesting to learn that the experiments of Professor Stockman and Dr. Choriniadis have led them to conclude that "a small amount of potassium iodide, when given to man by the stomach, is of decided benefit, as it has no deleterious effect upon the heart or the blood pressure in the arteries." The usual theory of the effect of the iodide of potassium has been that it stimulates the circulation and the contractions of the heart.

VINCERE, ETC.


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Section III

Foreign

and

Continental Opinions
An Italian Case

In the Hospital of S. Maria Nuova at Florence in 1895, the following case of hæmosarcoma of 7 months' duration, coming on in violent pains, was treated.

J. D., aged 44, a single woman, was admitted on January 27th, 1895. Her family history was good. She was backward and could scarcely articulately till 5 years of age. Menstruation began at 17; it was nearly always regular, but scanty; her general health was good. At 20 she had a fright from her bed catching fire, followed by a fever for four or five days. About this time she was seized by a violent pain in the stomach which lasted three days, and left an uneasy sensation of lightness and distention aggravated by taking food. Later on, until the age of 37, she suffered from general weakness. There was no vomiting, acidity or eructation, only occasionally a slight pyrosis. Seven years ago she was cool exposed to great heat, and experienced severe pain in the left side of the abdomen, complicated with diarrhoea lasting sixteen months.

She passed four or five mucous, watery defecations daily; this was followed by excessive general weakness, in which an attack of malaria supervened.

At the beginning of August, 1894, apparently coincident with mental worry, she was seized with frequent eructations. These lasted for 30 days, after which followed attacks of hæmorrhage repeated five or six times a day, and gradually becoming convulsive. They were noisy and apoplectic, but could always be evoked by pressure at different points of
the body, but not along the previous track. The pupils reacted to light; the conjunctival and pharyngeal reflexes were absent; the patellae exaggerated. The temperature was normal, the pulse 60, the tongue clean, the stomach normal, and digestion good. The heart was normal, the pulse slightly irregular, the sounds of a natural size, soft and low; pressure on the left medulla immediately caused violent hiccup; pressure upon the left mammary region and stomach, the sides of abdomen, and even both ovaries, as also upon the last lumbar vertebra, had the same result.

At first there was absence of all resuscitative movements during the night, but now they are severe. An equal pressure such as lying on the stomach, produces immunity from pain and hiccup. The patient now complains of acute pain in the epigastrium. The escape of hiccup, which sometimes lasts from five to twenty minutes or longer, terminates as a loud emission of gas. The patient has not lost weight, or, if so, only in a very slight degree since being in the hospital. A great variety of remedies were employed: morphia, belladonna, antispasmodics, external application of lotion, electricity, baths, and subcutaneous injections, afforded temporary relief, but rendered subsequent attacks more violent.

The treatment now adopted is electric shocks over the stomach and abdomen, but in the principle of suggestion. This has resulted in a very great improvement, the attacks now rarely last more than ten minutes, and occur only a few times in the twenty-four hours.
A case of persistent hiccough cured by a combination of jaborandi after all other remedies had failed to exert any effect. The intervals between the attacks became gradually less. The contractions of the diaphragm varied from 16 to 20, to 30 and 40 per minute. The pulse was very variable, ranging from 100 to 120, and to 160 or 170. Respiration was frequent averaging about 24 a minute. The patient was haggard, and during the last three days had not eaten for fear of vomiting. During the progress of the disease no remedy exerted any influence whatever. Finally, jaborandi was tried and seemed at first to give good results. Improvement was very temporary and the hiccough became worse. As a last resource jaborandi was tried and a concoction of the leaves was made, and its administration followed by prompt physiological action. Respiration continued for about two hours and then at that time the hiccough disappeared. The question naturally arises as to whether the results obtained was a direct effect of the drug on the nerves centers at fault, or whether as is not un frequently the case in functional nervous, the result was due to the general disturbance of the system.
In the Algemeine Wiener medizin, Jahrgang, 1863, H. 38, W. Rubner reports a severe case of hiccup lasting for three months, and which morphine, given hypodermically, could only check it for a few hours or days. It resisted all the usual remedies, such as quinine alone and with extract of belladonna, tincture of castor oil, or tincture of valerian, in water or with aromatics, mustard poultices over the stomach, dry cuppings down the spinal column, chloroform, ether, zinc, bromith, numerous emetics, and purgatives. The patient dragged on for three months under various remedies, morphine being administered whenever a single attack lasted beyond eight hours. At last the attacks became over-powering, and the hiccup was so loud that the patient could be heard outside the house through two doors. She sat up in bed, supported by her parents; there was dyspnea and cyanosis, the head was festing in all directions, the pulse was small and frequent, the neck was distended.

Remembering a case in the Revue medico-chirurgicale, Dr. Rubner injected a solution of pilocarpine hydrochloric (3 centigrammes in a gramme of water). The hiccup was at once cured, as if by magic, and has never returned since.
In the New Clinic, 1894, June 17th. It is now generally accepted that the chronic consolidation of the diaphragm may be caused by either a displacement or an irritation of the phrenic nerve, reflex hiccup may be produced by diseases of the peritoneum, stomach, &c. Sometimes, it is due to severe cerebral disease. It is observed before death from malignant disease of the intestine. A patient aged 92, had a severe attack of hiccup two years ago, lasting five days, for which no cause could be found. In the present attack cocaine was given with the best results, after other remedies had entirely failed. Six days after the attack all the symptoms of intestinal obstruction including several vomiting attacks disappeared. An abdominal section was performed and a large mass of growth was found arising from the tail of the pancreas and surrounding the large intestine. An artificial anus was formed, but the patient soon died. In the case the patient seemed to be in the best of health until he had a slight attack of bronchitis. Five days later the hiccup reappeared and lasted eleven days. Seven days after the operation the hiccup intestinal obstruction manifested itself. The author thinks that the hiccup was the precursor of death from intestinal carcinoma. This attack could not of course account for the attack five years previously.

Attention is called to the value of cocaine in this affection.
In the Rigolet medicis, Dr. Januario's report

The case of a Spanish physician, who, during convalescence from an attack of cholera fever, had obstinate hiccup, which lasted three days, in spite of anti-spasmodic narcotics, cranke recommended the treatment.

He desired his wife to prepare him some infusion of licorice; she gave him by mistake an infusion of mustard, which had the effect of ceasing and permanently curing the hiccup. He afterwards tried the remedy on some of his own patients, with the same result, and Dr. Januario has given it successfully in three cases, where the symptom had lasted several days. The dose is a teaspoonful of mustard in four ounces of boiling water.

In the *Gazette médicale de l'Algérie*, Aug. 1869, Dr. Widal wrote,

A man in algæria was admitted into the hospital suffering under the consequences of cerebral congestion. Two or six days after his admission, and after excess in alcoholic stimulants, he was seized with violent hicough, the incessant spasms of which compelled him to remain in bed, and resisted all treatment by antispasmodics. The hicough was so intense and near by that it was heard outside the hospital.

The number of pharyngeal contractions reached fifty five in the minute, and their energy was so great that all the muscles of the trunk participated in them. There was considerable dyspnoea, short inspirations, red face, white tongue, loathing of all kinds of food, pulse small, weak - Infusion of orange, soda and lascarum, a blister on the epigastrium, icebaths to the extremities, were all used without success. Afterwards a pill was given containing 0.25 of a gramme of extract of opium every two hours, and the blister on the epigastrium was dressed with hydrochlorate of morphia. The next day notwithstanding the extreme doses of opium, the hicough continued with the same violence, the epigastrium was rather tender on pressure, and the patient had not slept an instant. The strength was gradually failing, the pulse was very small, and the loss of apetite was complete. Extract of belladonna in large doses, valerianate of zinc, sublimate of bismuth, magnesio and aperients were all unsuccessful, and chloroform succeeded no better.

Treatment. Dr. Widal at last had recourse to the sulphate of quinine, administering 8 of a gramme in one dose. The next day
it was announced that the bicough had entirely disappeared three hours after the quinine had been taken, and the sleep and the appetite were both restored. The quinine was taken every day in the same dose for three days, and the bicough never returned, but the patient gradually regained his strength. In this case the bicough had continued without interruption for nineteen days.

This case of Mr. Waddle corresponds to cases observed by Lanczoni and Bartholin in which bicough persisted for a considerable time after a fit of tertian ague.
In the Union Medical, No 157, Ill. Geppenh states.

That an unfailling mode of treating hicough when obstinate, and whether idiopathic or symptomatic, consist in making more or less forcible compression, for a few seconds or even a minute or two, at the inner extremity of one upon one or both clavicles. He suggests that this may operate by its influence upon the phrenic nerve.

M. Labour refers to a case of obstinate hicough, which was immediately relieved by the employment of chloroform.
At the meeting of the Lyons medical Society, July 1870, M. Guizard read an interesting case of convulsive hicouugh, or, as he prefers to call it, "thorea of the diaphragm"

A woman, 20 years of age, was admitted into the Hotel Dieu, January 30, 1869. Until her sixteenth year she had led an active country life, but then commenced her present sedentary occupation in Lyons, which she had pursued with much assiduity, notwithstanding the first appearing of the disease. Gradually her digestion became bad, and her general health deteriorated, while the pessaries at first regular, since August 1868, have been arrested. At this time convulsive hicouugh first appeared, sometimes coming on at first two or three times a day, and gradually increasing in number until in January 1869, they ran into each other. During sleep there was no respite. The incessant hicouugh continued, the patient vomiting almost all she swallowed, her appetite being very incompletely performed, and her strength so exhausted that her life seemed to be only an affair of hours. On admission the hicouugh reached several times in a minute, and was always much more frequent during and even after a meal. She was repeatedly visited by it at night, and any mental impression aggravated it. Her general condition was that of chloro-anæmia. Bromide of potassium earned to three grammes produced not the slightest effect. Electricity employed morning and evening for a week at first excelled a marked effect in relieving the spasm, but the amelioration kept getting less, and then entirely ceased. As by February 14, she was in no worse, the hicouugh recurring several times in a minute,
She left the Hotel-Dieu, and after remaining two months at home colored
on April 10 the Briouze-house Hospital. The leucorrhoea then occurred
seventy or eighty times in the week, and was accompanied by a
were resembling the backing of a dog, which was distinctly audible
at a distance of forty meters. The anemia continuing, wire and
bath, were prescribed together with rind vermicul and sulphurous
baths. Her general health improved, and the leucorrhoea somewhat
diminished in frequency; but still, by May 1, it recurred from
fifty to fifty-five times a day. Ether drenches along the spinal
column and opposite the insertions of the diaphragm were now
tried, as this means has of late been very successful at Lyons
in generalized cholera. After a fortnight's trial, the drenches
were reduced to forty per hour, but no further improvement was
made. From compassion over the insertions of the diaphragm
by means of a broad earache-gnelle was tried, with no
benefit, and then inhalations of ether continued during twenty
minutes reduced the leucorrhoea to thirty-five per hour. These were
repeated in all twelve times, and the effect at first was
remarkable, so that by the ninth inhalation the number of
leucorrhoeas had been reduced to nine per day. Afterwards
the others lost its effect, the patient after each inhalation returning
to her primary state.

Chloroform was therefore submitted, and it is to be regretted
(although of course at Lyons not surprising) that it was not
used at first instead of ether, for its use was attended with
infinitely less discomfort to the patient, while the amelioration
was surprising by its rapidity, and has continued permanent, two
inhalations having only been employed.
In the Bull. de Therapeutique, May 18, Dr. Ortelle of Lille relates a case of most obstinate hiccough in which he had tried a great variety of means, including electricity and hypodermic morphia injections. The hiccough even continuing during the sleep caused by this last. He then tried the hydrochloride of pilocarpin on account of its action on the phrenic nerve. A hypodermic injection of two centigrammes and a half was injected with almost immediate effect, so that in a quarter of an hour the patient was bathed in sweat, respiration was established, and the hiccough disappeared, never to return.

Dr. Ortelle relates another case of hiccough in a female aged 56, which had continued for seven months. In this case a decoction of four grammes of sabordan leaves and stalks to be taken in two doses fifteen minutes apart was prescribed. It cured the patient in two hours.
In the Revue med., 1811, Dr. Fairley, in an obtinate case of hicough, which had resisted all the various means tried, compressed the epigastrium forcibly by means of a tourniquet. In two minutes the hicough which had lasted uninterruptedly for fifty days had completely ceased. At first it reappeared on the compression being relaxed, but afterwards was permanently arrested.
In the Revue med. Dec. 16, Dr. Gellest of Vichy states, that he has never failed in immediately relieving simple hicough - i.e. not dependent upon any appreciable morbid condition - by administering a lump of sugar imbibed with vinegar.
At the St. Petersburg medical society, May 1840, Dr. Rachet mentioned a case of hemicramp occurring in a hysterical girl twenty-two years of age. The attacks lasted for thirty-six hours, the singultus occurring from ninety to one hundred times in the hour. Valerian and the bromides were of no avail, and chloroform succeeded only as long as the narcosis lasted. Morphine hydrochloric injections were useful only for a short time, injections of distilled water proving of more use. No disturbance of the functions of the female economy existed. In a similar case, G. Anders had found the application of the constant stream of electricity highly useful, while Fabricius had never derived any advantage from the use of this in hemicramps. In a case which he had seen the hemicramp always occurred as long as the patient was silent, but disappeared when she was speaking. Dr. Meyer had quickly succeeded in a case by a hypodermic injection of one forty-fifth of a grain of atropin.
In the Bull. Gér. de Thérap. 1885, Dr. Ramos—a Brazilian physician—states that refrigeration of the lobe of the ear will stop hemorrhage, whatever its cause may be. Very slight refrigeration will answer; the application of cold water, or even of salvia, being sufficient.
In the Revue Medecine, M. Dupin directs attention to the influence of malaria on the vision and its expression in severe States.

In support of this a case is reported of a countryman who recovering from an attack ofague was seized with a violent hiccough which in spite of opiate, blister and antispasmodics persisted for nine days, when it disappeared under enema of quinine.
In The Gazette d'Alger, Oct 10th, 1865, Dr. Danel, in a severe case following great mental disturbance and associated with headache and vertigo, after trying a great number of antispasmodics in vain, mastered the difficulty with a pill containing three quarters of a grain of valerianate of zine and a small quantity of belladonna.
Dr. Duret of Tours, France, speaks of a method, not original with him, but very effective, in which the patient's external auditory canals are firmly closed with his fingers and he is caused to take a few sips of fluid from a cup held by another person.
Obstipation, gaiturization of the phrenic and esophageal region,
short grain dew of bromide of potash, and one-twelfth of a
grain of salicylic every three hours, produced only transient
relief; and at last, one drop of a one per cent solution of
nioho glycerine was given every two hours at first, and later
at longer intervals, producing a complete and total cessation
of the symptoms. In this ease, which lasted eleven days, the bihour
had become constant, and was a source of great danger. Of
course the remedy produced a considerable headache, but,
predgaging from its good effects in angina pectoris, it is not
unreasonable to suppose that it may be of service in many severe
cases of this kind. For a similar reason I would suggest the
use of liquor potassici ammonii, in one half drop or drop doses
every hour for part of a day, and then every two or three hours.
The addition to this of belladonna or atropia would, perhaps
produce better results in some cases than the Jutels solution alone.
I do not recollect to have seen the remedy mentioned in this connection,
but believe it, or the above combination, worthy of trial.

Dr. I. Hutchinson of Providence, R. I., writes in a communication to
the medical Register giving specific directions for the application
of electricity for the case of this annoying symptom.

One pole of a Fleming induction coil is to be attached to a
round sponge electrode, say one and a half inches in diameter,
which is placed over the axillary flexus, from pressure being made
by bringing the arm down to the side and holding it there. Place
the patient in a sitting posture, strapped to the waist, and, using
a large moistened sponge for the other pole, commence making slow
shocking passes over the intercostal spaces on both sides extending
around the faunula. The current should be mild at first, gradually increased in strength until the intercostal muscles plainly contract; unless the pain becomes too great to bear, before that point is reached. Otherwise, the current must be weaker, and care taken to avoid a chill.

The hypodermic injection of the tincture of gelosimum is said to cure buccough in cases characterized by the condition known as high anterior tension. From ten minutes to one drachm, diluted with an equal amount of water, is given hypodermically. A correspondent states that he has never known it to fail in suitable cases, and has had considerable experience in its use. The injection is made at various places, the cheekbone region being generally given the preference. Local abscesses occur in something less than five per cent of the cases thus treated.

A physician who has been afflicted from boyhood with attacks of buccough, coming every six or seven weeks, and lasting the greater portion of a day, accidentally learned that chewing calamus root controlled the spasm for the time being. It does not possess any curative property, but simply stops it for the time.

A correspondent of the Therapeutical Gazette recommends the extract of hypogymnus in full form, and presents very gratifying reports of its results. Another correspondent to the same journal reports complete success from the use of a decoction of the root of phasia officinalis.

Hoffmann's anodyne, in teaspoonful doses, undiluted, and much more remedies, frequently recommended as sure specifics. I have asked personally, both remedies, and they both failed. It must be admitted that, possibly, a good deal of our Hoffmann's anodyne is not genuine, in account of the experience of ethereal oils,
and consequently an omission of that article in its composition. Such being the case, a failure from its use for the relief of hiccup or any spasmodic affection would be anticipated.
In The Philadelphia medical Times: a case is reported where the passage of an oesophageal tube, repeated occasionally, cured an obstinate attack of hiccough.
Extracts from a Text Book of the Theory and Practice of Medicine by American Authors

Edited by William Phipps, M.D., L.L.D.

1843. Vol. I.
Spasm of the diaphragm may be either tonic or clonic. The former is stated to occur sometimes and to be the cause of death in tetanus. Clonic spasm of the diaphragm causes hiccup and surgulkes. This may be a functional disorder, as in hysteria, but the spasm is not infrequently excited by the direct action of hot substances as they pass through the oesophageal opening of the diaphragm. Occasionally it arises from reflex irritation in the stomach or intestines, as in dysentery, cholera and peritonitis. It may be caused by direct irritation of the phrenic nerve in its course. Much more rarely it is due to central irritation.

In chronic alcoholism and in anaemia it may be persistent and dangerous symptom. In lead poisoning it may occur without any obvious cause, and persisting day and night, may prove fatal.

Though rarely causing death, protracted cases in delicate or elderly people may be serious and very difficult to relieve. Among remedies which may be tried are inhalations of nitric acid, which usually relieves with great promptness, and the good effect may be kept up by the administration of nitric glycerine in the enemata. Inhalations of chloroform check the spasms at once, though usually only for a time.

The hypodermic injection of a quarter to a third of a grain of morphine may be necessary to produce sleep. Nothing relieves the prevalent hiccup of acute alcoholism better than a hypodermic injection of apomorphine. The hysterical form rarely resists the electric shock.
In a case of Relapsing Fever J. Sanderz Pepper writes.

As the jaundice in relapsing fever is in large part of haemorrhagic origin, no special treatment can be advised; but the condition of the stomach and duodenum must be considered and carefully treated. The jaundice may be either relieved or checked by the administration of chloroform; this drug also controlling the periodic periodic chills that occur in some cases. In obstinate cases hypodermic injections of morphia and atropine into the tissues around the base of the chest may be tried.
Cases noted by,

Heating  mackenzie
Layous  Ables
Tanner  Wood
Meadows  Fitz
Nailey  Whittaker
Pye-smit  Thompson
Liveling  Musser
Watson  Bartholomew
Oslor  Stedman
Foot
Healing in his Encyclopaedia on Diseases of Children says, "Benoni speaks of a case of his in which a girl 11 years old had violent attacks of hicouphs and retching with haemoptysis during which half a cupful of blood was brought up. Nothing wrong could be detected by examination of lungs, tongue, teeth, or throat."

Healy believed that it was not an attack of stimulation but one of hysterical occurrence after mental excitement. She was cured apparently by the physical or perhaps by the painful effects of Euphene injections.

Healing goes on to say in speaking of children that hicouph is a very common disease during the first three months of life. It has been noticed within 24 hours of birth, and even when bad it may be arrested by a tablespoonful of lukewarm sugar and water.
In the Annual of the University Medical Society, page 473, Vol. 4, Saugus writes of having found non-emetic doses of quinine, very serviceable in troublesome biliousness.
In the Annual of the medical Sciences - edited by Taylor.

There is an instance by J. M. Boals who found sulphonal of the greatest value in lieseough.
So far there is no evidence of any serious cases of F. M. or death from it.

The treatment is as follows: First, remove any foreign bodies or objects that might be causing pressure on the lung. Second, administer oxygen to help with breathing. Third, use antibiotics to treat any bacterial infections. Fourth, follow up with supportive care such as fluids and pain management. Fifth, if the condition persists, consider more advanced medical interventions like surgery or mechanical ventilation.

It is important to note that these treatments should be done under the guidance of a qualified medical professional. The severity of the condition can vary, and the specific treatment plan will depend on the individual case.
Stanley in his Diseases of the Liver, says:

"Although so rarely even alluded to in books on Liver diseases it is at times a most distressing symptom to the patient."

It occurs only in very bad cases, generally in the aged, and in almost all of them it is found that the hepatic disturbance is associated with some form or other of gross disease, pyaemia, septicaemia or typhoid.

The treatment I have found most successful is to administer hydrocyanic acid or a few drops of chloroform with Belladonna, atropine or morphia, but as the bichloro sometimes resist these I propose on the next occasion to try the effects of inhalation of Amyl Nitrite, Spiritus Alcoholi, nitrosi, and spiritus benzoacet., half a drop or 6 drops, an ounce respectively - a few drops to be put on a handkerchief and inhaled.
Pyrexia says
Gastric disorder may manifest itself by producing reflex disturbances of other parts. Thus palpitation of the heart, and cough are occasionally produced by overloading the stomach.

A somewhat similar condition is hiccup or singularus.
This is due to a sudden spasmodic contraction of the diaphragm, repeated at more or less regular intervals, and attended with a clicking sound which is caused by the abrupt passage of air through the glottis.
Its recurrence can often be stopped by holding the breath.
Age is not usually a matter of any consequence. It lasts only a few minutes or at most an hour or so, but in dangerous cases it sometimes continues for days together, and it may then exhaust the patient and appear to be the immediate cause of death.

Dr. Edward Sedgwick mentions
I had a man past middle age under my care, in whom hiccup returned in paroxysms of 12 hours duration about twice a week for 4 years; and he quotes a case of a little girl of 12, who for nearly 3 years was subject to fits of violent hiccup, which lasted for 10 minutes to an hour, and returned three or four times during a day or night.
She was cured by taking turpentine.
Watson in his *Principles of Physiology* says that hysteric affections of the diaphragm are by no means rare. I had a very obstinate case of that sort in a hospital patient. The woman sat in her bed all day long uttering every eight or ten seconds a most discordant bellowing; and the patient I remember a picture of perfect health came week after week to be cured of what I could consider nothing else but an hysterical temperament.
Osler in his Book on medicine says:

"Although a remarkable symptom caused by intermittent sudden contraction of the diaphragm, the mechanism is complex, and while efferent impulses to the respiratory centre may be peripheral or central the efferent are distributed through the phrenic nerve to the diaphragm causing intermittent spasm, and through the laryngeal branches of the vagus to the glottis causing sudden closure as the air is rapidly expired. Obstructive larynx is one of the most distressing of all symptoms and may tax to the uttermost the resources of the doctor."

Color goes on to quote W. Langford Sykes, divisions of the types of larynx: (1) Inflammatory, (2) Irritative, (3) Specific, (4) Neurotic.

Color recommends ice, a tablespoonful of salt, lemon juice or salt and vinegar or a tablespoonful of raw spirits. When larynx is due to gastric irritation lavage sometimes promptly stops it. Galvanism over phrenic nerve or pressure on nerves over clavae mastoid muscle may be used. Strong retraction of tongue may be of use.
Before the Medical Society of the College of Physicians in Ireland, Wednesday, Nov. 16, 1837, Dr. A. H. T. Fort detailed the clinical history of a lad aged 15 whom he had been called to see on about the 9th of Aug. The patient had been hiccupping incessantly, except when asleep, for 22 weeks since Nov. 5, 1836. The hiccup came on "in a second," just after he had got up on the morning of that day. He had been previously dyspeptic and was using soft wine and fruit Association. The hiccup began immediately after he had taken a dose of Joseph's balsam of aniseed. It was loud and noisy and punctured up all his meals. He had had two similar, but less severe attacks, one in the summer of 1839 and one in the summer of 1830. The cure of the second attack was attributed to a visit to Knock, but on the present occasion he had derived no benefit from a visit. The only cause of the hiccup he could think of was his habit of leaning forward and pressing his chest against a desk. Among other measures adopted for his relief, Dr. Fort rubbed the skin over the epigastrium and along the course of the phrenic nerves of the neck and over the upper cervical vertebrae with the other spine, with the effect of producing slight temporary improvement. But the patient began to recover quickly, immediately, after he was put on pills of India-powder (one grain), extract of Indian hemp (one third of a grain), and extract of henbane. The dose of the Indian hemp was increased by degrees to two grains a day, and the hiccup gradually got less frequent, softer and less noisy. On May 1st,
he left the hospital quite well after a stay of 14 weeks and 6 days. The rate of the ballast was calculated on thirteen occasions. It varied from 8 to 32 per minute or from 480 to 1920 per hour. Its average rate was 14 per minute, or 840 per hour. It lasted without intermission, except during sleep, for 16 weeks.
Sir Morell Mackenzie has said that if encephylo can be established in a person suffering from hiccough, relief can be obtained.
Abeles describes an outbreak of hiccough in a girls' school that continued for several months, and refers to one in a village in which so many of the inhabitants were affected, that the fact of the epidemic was evident to anyone passing through the street.
The Practice of medicine. Wood & Dey 1877. p. 416.

The peculiar convulsive motion of the diaphragm, and neighbouring parts, known as hiccup, or hiccups, may be of reflex origin, due to disease of the lungs, peritonitis, stomach, liver, and gall bladder, intestines, ileus, or prostate, or to mediastinal tumours. It also may be the outcome of disease at the base of the brain, or may be purely functional. In alcoholism, rachitis, or typhoid and other low fevers, etc., it may be the cause of death.

Treatment. Very cold or very hot or violent drinks sometimes are of service. Locoam, must, the bromide, camphor, chloroform, given by the mouth or in full dose, are often efficient. Chloral, arsine nitrate, hypodermic injections of morphia with atropine, and even inhalations of ether may be used in occasion. In very persistent cases threatening life, the stomach may, if circumstances favour, be washed out and then allowed to rest absolutely from food, drink or medicine for one, two or even three days. The patient during this time should receive digested nutritive emulsions and an enema of weakly alkalized water (sodium carbonate) as large as can be retained, alternately every four hours, sufficient chloral and opium being put in these emulsions to maintain a semi-narcosis, or at least to control the hiccoughs. Stimulants may, if required, also be given by the rectum.
The Theory and Practice of Medicine by James J. Warren, M.D. 1893-1895

Singultus, nervous or hysterical. Huya controls it with pilocarpine 0.10 in 10.0 water, of which ten drops three or four times a day. It is not to be used in the acute hiccough which is such an ominous sign in many grave infections.
When the phrenic nerve is affected hicough results. This nerve may be irritated at its origin, along its course or peripheral distribution, or from the radiation of nerve impulses from the centres in the medulla, which control the complicated mechanism of hiccough, which includes, a short quick inspiration that is interrupted by incoordinate action of the laryngeal vagus branches in closing of the glottis. The loud sound emitted is due to the impact of the entering air against the closed glottis.

Persistent hiccough is a phrenic neuritis of varied origin. Some cases are associated with rhachitis, some with gastric disorder, and by far the larger number occurs as a manifestation of hysteria, and are originally excited by sudden fright or some other emotion. Among young school girls may, like chorea, become epidemic from imitation, and it is sometimes described as "chorea of the diaphragm", yet it is not a feature of ordinary chorea. I have seen a severe case lasting for several weeks in a young man who was unexpectedly interrupted in the midst of sexual gratification. Andrew H. Smith has reported a case persisting through the three terminal months of gastric carcinoma.

Persistent hiccough lasting for several days after opera during the final stage of angina. It may develop in the course of typhoid fever, intestinal obstruction, pneumonia, goit, diabetes, and severe typhoidemia, and it is a most unfavourable symptom under such conditions. A patient attacked by persistent hicough in the course of pneumonia rarely recovers. Hicough is more rarely caused by pressure upon, or possibly a neuritis of, one of the phrenic nerves, by pressure upon the medulla medastinal growths may cause it. An exploring laparotomy
was recently performed upon a patient for me by Lewis A. Sternin.
The patient, among other more serious symptoms, somewhat resembling
those of an impacted gall-stone, had had continuous hiccupping lasting
eight days. The pancreas was found adherent throughout its entire
length to the greater curvature of the stomach, with a mass of
inflammatory adhesions an inch in thickness. Adhesions also
bundled the hepatic flexure of the colon. The adhesions were broken
up with relief of pain and other symptoms, and the hiccuping ceased.

The simple attacks, lasting but a few moments, or at most an hour
or two, which almost everyone has experienced from indigestion,
aise from interruption of digestion, abnormal gastric fermentation
or similar local causes acting reflexly upon the hiccupping center
within the medulla, which is closely connected with both the
respiratory and respiratory centers. Such attacks are of trifling impact,
but the hiccup, which persists for days, or even weeks and months,
becomes a most serious condition and even menaces life through loss
of sleep and inability to take sufficient nourishment. The chronic
spasm of paralysis syphilitis and the spasmodic tic, the diaphragm
spasm ceases during sleep, but it may prevent sleep until the patient
becomes exhausted. There is resomeness even the lower intercostal muscles
and those of the abdomen attached to the ribs, and the noise made
by the incessant hiccup is a source of much annoyance.

The duration of attacks varies. I have seen several cases
which had lasted from two to three months.

Prognosis for hysterical cases or those due to the simpler forms
of gastric disorder is usually good. In cases of unknown origin
occurring in patients who are not nervous it is more serious
but the affection is not often fatal, although severe.
TREATMENT. Hypothalamic cases, or those due to fright, yield in a day or two to the ice-pack, a few doses of ipecacuanha, and moral support, with isolation from sympathetic friends. The more severe cases due to gastric conditions (other than organic disease) I have seen promptly benefited by lavage and a simple bread and meat diet. Some cases are extremely rebellious to treatment, and a number of remedies have to be tried in turn. Among the most useful, in addition to those mentioned above are spirit of chloroform (in xxx), amyl nitrite, codeine (gr. ¼), cocaine (gr. ½), and the bromides. Wrapping the lower chest tightly with bread strips of rubber adhesive plaster gives some relief. Possible sources of reflex irritation in the nose, ear, throat, generates organs, stomach, should be sought and removed. Manage of the stomach is sometimes of benefit, but the use of galvanism over the region of the phrenic nerves in the neck and diaphragm probably acts through mind-coma if at all, for the electric current so applied in any justifiable strength passes too superficially over the skin to reach so deep seated a nerve as the phrenic. If it could reach the phrenic nerve, it would be likely to affect the vagus also. I have found the cold pack a most efficacious remedy.
Niceough, or stridulus, is a spasm of the diaphragm. The contractions take place at more or less regular intervals, attended with a peculiar clicking sound. This sound is due to the sudden passage of air through the glottis. Nieceough may be a serious symptom. It may last but a few minutes or continue for several days. It causes extreme exhaustion. Its occurrence in chronic disease is of bad prognosis even.

Nieceough, although a muscular affection, is usually associated with gastric disturbances.
though persists in a recurring spasm of the diaphragm; there is first a full expiration, then a sudden inspiration, accompanied by a high tenor sound, caused by a spasmodic closure of the glottis. It is often present without having any significance. It is a symptom of certain kinds of indigestion, and is present only during the stage of digestion. Distension of the stomach may cause it. Hepatic diseases, pectoritis, chronic rheumatism, are maladies during the course of which borborygmi may come on, especially in collapse, which is how in death. It is a symptom of irritation of the respiratory centre, and of various diseases of the central nervous system, and is one of the manifold forms in which hysteria manifests itself. The word "hysteric" was invented by the author returned after a severe attack of hepatic colic.

Treatment of strong mental impression, or a draught of very cold or very hot liquid will sometimes succeed in arresting borborygm. Electricity is usually very successful. The inhalation of ether, of nitrous of amyl, and the injection of pilocarpine have all promptly succeeded.
Extract from Twentieth Century Practice
Edited by Thomas F. Hedman M.D. Vol X. p. 704

Asthma is caused by chronic spasm of the diaphragm, sudden tension of which occasions a noisy expulsion of air, followed by an incomplete inspiration and then by a normal expiration.

According to Gkb, the condition is one of sudden, and brief contractions of the diaphragm, producing an inspiratory noise suddenly interrupted by closure of the glottis.

It is especially in cases of so-called essential asthma that we may see relief obtained by rapid and uninterrupted respiratory movements (Mallard), a spray of ether to the epigastic region (Regoli) or ether inhalation, or by the swallowing of liquids while the ears are closed with the tips of the fingers.

Spasmodic convulsions may involve, at the same time with the diaphragm, all the respiratory muscles, even the accessory muscles of respiration (Gkb).
Extracts from
Forbes's Cyclopaedia
Edinburgh Hospital Reports
Indian medical Gazette
Report of medical Society of London
Johnson's medical chirurgical Review
Hautzinger's Abstract
London Journal of Medicine
British and Foreign Review
Dublin Quarterly Journal of medical Sciences
Braithwaite's Retrospect
The Medical Annual
The Edinburgh Medical Journal
Journal of Practical Medicine and Surgery
Clinical Manual for the Study of Medical Cases
Clinical Lectures on the Practice of Medicine
Medical Press and Circular
Asclepiad
Westminster Hospital Reports
Edinburgh and South African Hosp Papers
The modern opinion (1823) which ascribes hiccup generally to the respiratory muscles, rests upon the following among other arguments:

1. The phenomena of the affection appear to consist chiefly in a convulsive act of respiration.
2. The researches of physiologists have clearly shown that the muscles in question, or at least some of them, are capable of movements corresponding with those of hiccup, in rapidity and violence.
3. We are without any satisfactory evidence that such motions are ever performed by the muscular fibres of the stomach.

A consideration of the popular methods of preventing the recurrence of hiccup, namely, holding in the breath for a considerable time, and making a protracted deglutition by sipping liquids, both of which seem to owe their efficiency to the power of the will over the respiratory muscles.

With regard to the peculiar noise which accompanies hiccup, there can be little doubt that it is caused by a convulsive or spasmodic action of the muscles about the glottis.

There are two convulsive affections which, without being absolutely identical with ordinary hiccup, so nearly resemble it, that they are designated by the same word, at least in some languages, and must apparently be referred to nearly the same muscular power. Thus what is properly called the hiccup of death, although having no name to no similarity to the true hiccup, in some respects differs from it. According to Drabble, it consists of two quick and forcible inspirations preceding a feeble and protracted
expiration. The affection, which we callling sobbing, is so analogous to hicouagh, that, as has been observed, the Greeks and Romans designated both by the same word. Indeed not only do they nearly resemble one another, but sobbing in children often passes into perfect hicouagh.

The cause of hicouagh may be described as Idiopathic and Symptomatic. By far the most frequent cause of idiopathic hicouagh is some impression directly made upon the stomach; as, for example, by very hot or highly seasoned food, especially in a liquid form, by alcoholic and other stimulating liquors, and by food swallowed hastily, or in too great quantity, especially after long fasting. As the affection, when produced by causes of this kind, generally occurs almost immediately after the stimulating matter is taken into the stomach, it may be reasonably inferred that the impression upon that organ, which calls forth the muscular efforts by which the hicouagh is effected, is chiefly made upon its cardiac extremity; and we shall hereafter see that one mode of explaining the final cause of the affection is by a deduction from this opinion.

The occasional causes just enumerated evidently act upon the sensibility of the lining membrane of the stomach; but there are others which seem to operate by a mechanical impulse communicated to the whole organ. Thus, in children more particularly, any vehement or convulsive movement of the respiration, muscles, as violent crying and sobbing, or a fit of coughing, is apt to end in hicouagh. The same occasionally happens with vomiting, as was observed by Hippocrates, who
noted it as an unfavourable occurrence.

A cause of a very different description from the above is fasting. It involves a prolonged absence of the proper and accustomed stimulus of the stomach; and the influence of this negative impression seems to afford a more probable explanation of the occurrence than the hypothesis which has referred it to the supposed irritation of the gastric juice.

Idiopathic hiccup, though generally, is by no means exclusively produced by causes directly influencing the stomach. Emotions of the mind, copious evacuations, as bleeding and purging, cold applied to the surface of the body, as the epigastrium, feet to; and in fact where there is a predisposition to it, almost any impression, external or internal, may call it forth.

It is familiar that childhood and old age are more liable to the affection than the middle periods of life; and that the female sex, especially in the parous and postpartum state, is more subject to it than the male. There seems however to be ground for a more definite view of the matter and for referring the predisposition, at least in a majority of cases, to a preconceived sensibility of the stomach, or to a tendency in that organ to functional rearrangement. Such a condition or tendency is well known to exist in the earlier and later periods of life, and during gestation; and it is probably owing to its presence in an unusual degree that, in some individuals, even a moderate quantity of the melted food will often cause a fit of hiccup. Indeed in such persons it not infrequently occurs without the intervention of any known cause.
The second division of cases of hiccup includes those in which it co-exists with, and appears to depend on some other disease as its cause; being thus what we call a symptomatic affection. It has been noted by authors as occurring principally in the following diseases: fever, both continued and intermittent, especially the latter; a complication which seems to have been formerly not uncommon, as the opium preparation, was applied to fever accompanied by a hiccup throughout their course.

The most frequent cause of idiopathic hiccup is some direct irritation of the gastric mucous membrane, so by far the most common mucous affection on which the symptomatic remedy depends is functional or organic derangement of the stomach, and of those organs which are associated with it in the digestive process; a derangement of which habitue excess, particularly in the use of ardent spirits, is undoubtedly the principal cause. Many of the older writers note its coming on after the sudden cessation of alcohol. Among others, Thed, Hoffmann mentions instances in which the hiccup assumed both a continuous and periodic form. It has also been observed to ensue upon the disappearance of continued fever, gout, rheumatism, and intermittent diseases, and upon the cessation of a sudden or accidental evacuation, as the menopause, hemorhoids and diarrhœa. When originating in this way, it is sometimes very tedious and obstinate; as, for example, when connected with amenorrhœas, not ceasing till the menstrual evacuation is re-established.

It has been before stated that hiccup sometimes follows and takes the place of other convulsive movements, in the production
of which the respiratory muscles are chiefly concerned. In like manner it occasionally terminates in them. The most common instance appears to be that of sneezing.

Having thus mentioned most of the facts relating to this affection, which seem worthy of notice, it will be proper to make a few remarks on what may be called its final cause. In many of the convulsive movements of the body, such as coughing, sneezing, and vomiting, this is in general sufficiently obvious, being either the expulsion of offending matter, or the protection of the excited part by exciting secretion; or the restoration of its interrupted circulation and functions. In others, as epilepsy and often asthma, the existence of such a cause, though not admitting of demonstration, seems deducible from a just analogy; and the same may be said of hicough, at least when excited by some direct irritation of the stomach.

In such cases, the final cause is evidently not the repetition of the offending matter; for this would be effected by the act of vomiting, which hicough has little or no tendency to induce.

It is conceivable that the end to which it is directed is the propulsion of the exciting matter towards the duodenum, and thus the final cause has been conjectured to be the removal of such matter from the cardiac extremity to a less sensitive part of the stomach. However, that may be; it seems probable that the hicough subserves another and perhaps more important purpose - that of detaining so much of vital energy to the organs of digestion, especially the stomach, as shall counteract the morbid influence exerted upon them, and induce a vigorous performance of their functions. Such a view would
accords with that pleasurable sensation, referred to the
epigastric region, which is stated often to follow a fit of hiccup.
The same may be said of a fact already mentioned, the
occurrence of hiccup as a termination (sometimes apparently a
epicaudal one) of continued and intermittent fever, and also of
its occasional appearance at the commencement of croupous fever.
To these may be added another, mentioned in the first report
made by Dr. Russell and Carrey on the cholera at St. Petersburg.
These gentlemen observe it is “singular enough to say, hiccup
coming on in the intermediate moments between the threatening
of death, and the beginning of reaction, is a favourable
sign, and generally announces the return of circulation.”
Undoubtedly, the above view of the final cause is most obviously
applicable to those cases in which the hiccup appears as the effect
and remedy of a temporary irritation; but it is by no means incorrect
with others in which the affection is symptomatic of some grave or
fatal lesion. The parts of our frame are so associated by that
inexorable bond which we call sympathy that irritation in one
organ commonly gives rise to a marked condition or movement in others.
This association is governed by certain general laws, often very imperfectly
known to us, but the great end of which is manifestly the preservation
of the whole body; and the operation of these laws continues, not
only when it cannot produce any beneficial effect, but even when it
becomes absolutely pernicious. Thus the hiccup, which when in death
is a fruitless effort of nature, while that which results from abdominal
wounds, inflammation, or fever, may not only be inadequate to
accomplish any good purpose, but may even aggravate the existing evil
by a repeated concussion of parts which stand in need of perfect rest.
Discussion before the Medical Society of London, January 12, 1863

Dr. Habershon related the particulars of two cases of hiccup, one chronic, associated with epilepsy, the other preceding the formation of an abscess in the pericardium. The first was a man aged twenty-one, under his care at Guy's Hospital in August last, a railway porter who had received several blows on the back and neck, and had been struck on the head with a buffer. Some time after he was seized with hiccup, more severe on lying down; sleep much disturbed, no affection of lungs or heart. It could be postponed by counting continuously, and disturbed on his waking about. It was cured by inhalation of potassium, quinine, niece, then oil and blistering to the neck. The second case was in a man aged thirty-seven, whose hiccup preceded the formation of a pericardial abscess, and did not finally cease until it had been opened, and was quite healed. He thought both cases due to some indirect irritation of the phrenic or vagus nerve acting on the spine, and thence reflecting to the phrenic nerve.

McLaverty remembered seeing a case under the late Dr. Todd very much like the first described, in the person of a young woman, in whom hiccup was present day and night, depending upon some intestinal derangement. He gave a powder dose of calomel at the commencement, and recovery ensued.

Dr. South thought that cases of hiccup were not so rare as is generally believed. He recollected seeing two very bad cases, one in his own practice, and one in University College Hospital.

Both were treated as in Dr. Habershon's first case, namely by blistering in the region of the vagus or phrenic nerve. This produced cure in both.

Dr. Habershon related a case of dyspnoea, spinal disease and hiccup, in which the last was much complained of.

Dr. Habershon asked if surgeons had noticed it often.

Mr. Henry Smith remarked that it was a frequent symptom in malaria about to die.

The patient, a native soldier, was admitted into hospital for a severe attack of secondary syphilis (rubella) and treated with the bichloride of mercury. At the end of five weeks he was seized with burrogh which continued with little respite for five days in spite of the exhibition of chloroform, hydantoin of chloral, strychnine, subcutaneous injections of morphia under intercostal muscles, belladonna, plaster to ephinaeum and calomel, in one large dose.

**Treatment**

On the sixth day a blister was applied to the origin of the phrenic nerve, and he was given extreme doses of iodide of potassium every six hours, and a full dose of quinina once a day with red poppa water to drink. This treatment was carried on for eight days, the burrogh becoming daily less frequent, until on the tenth day it entirely stopped.

The dose of iodide of potassium was gradually reduced as improvement took place, and on the twenty-third day the man was "discharged to duty."
A male negro, aged 40, was admitted to the Hospital with dyspnea, dysphonia, and hiccup. He would hiccup constantly for five or six minutes and then enjoy a short period of rest. Bleeding, cupping the epigastrium, and hydrocyanic acid used internally, were resorted to, but with no effect.

Treatment: After twelve days he recovered, while taking laudanum and ammoniac.
In Johnson's Medico-Chirurgical Review, January 1836, p. 196, De Moga of Hoolenford reports:

A case in a male aged 60, corpulent, phthisic and addicted to 'bacchanalian pleasures,' who having suffered for nine days from gaseous distress, took an emetic and immediately a violent and unceasing hiccough ensued. Vomited, coughed, much, vomiting of water, blood in vomit, the hiccough continued to give much pain.

**Treatment:** After lasting for three days the spasms ceased under a blister applied to the abdomen.
Some years ago, Professor Estan pointed out, at one of his clinical lectures, two cases of convulsive hiccup, which had yielded to no medical pressure upon the epigastriae region; after various remedies had failed in procuring relief.

Dr. Bozo, publisher in the Courier médical, several analogous instances, derived from his own practice.

The following is an abstract of his communication to that journal:

A young woman, aged eighteen, suddenly became affected with an easing hiccup, connecting with sudden compression of the abdomen caused by exposure to cold. She was bled from the foot, but derived no benefit from the operation. Dr. Bozo, equally to the success, laid down by Professor Estan, applied his hand to the pit of the stomach, and exercised vigorous pressure in that region. Slight improvement followed, the hiccoughing action seemed to lose some of its intensity, the breathing became less frequent, but the result was not a complete cessation of the hiccup. A large ball of linen supported by a tight bandage was then placed over the epigastriae region. The symptoms almost immediately yielded; an antispasmodic mixture was prescribed, with an effervescing draught to be taken in steps.

At ten o'clock at night, four hours after the application of the bandage, the patient, uninformed by the pressure, removed the apparatus, but the hiccup having instantly returned, the pressure was reapplied with success, and was continued for several days, during and after which no relapse was observed.

The second patient was a young man, aged twenty-four,
in whom there is mixed with oppression.

Dr. Boyer, instead of resorting to the lancet, as he was requested, rolled a few法治 bandage into a stout ball, which he placed over the pit of the stomach, and tightly secured with a belt. Ten minutes were sufficient to effect a complete cure.

A similar result was observed in the third case related by the author:

"This very simple method of treatment is at the same time so perfectly rational," says Dr. Boyer, "that we may well be surprised that it should not have been thought of before. It was not, however, instituted for the first time by Mr. Bostan, nor by the gentleman who mentioned it to that professor. It had been long before resorted to with entire success by Boudin, in whose words occurs the following passage: Having once been called in to attend with another practitioner in a case of obstinate hiccough, we proceeded in vain all the remedies suggested by experience, reflection, or books; but we cured the patient at once by a tight bandage placed around the epigastrium region, side and back."
In the London Journal of Medicine, April 1849, p. 365, M. Laneu reports a case in a male aged 17, very nervous and of weak constitution, who suffered severely with buccough for three hours, and was cured by inhaling chloroform.
In the British and Foreign Review, January 1830, p. 284, Dr. Schneider of Berlin reports having cured many cases of violent and persistent brouch by giving dilute sulphuric acid. In this treatment Dr. Duncan of Edinburgh and Dr. Jacobson of Berlin concurred.
In the Dublin Quarterly Journal of the medical society, vol. 1, 1884, p. 527, Dr. Phipps of St. Louis, Mo. reported a distressing case of hemorrhage in a male aged seventy three in which every ordinary remedy failed, and which finally was cured by the subcutaneous injection of three centigrams of phlorrhizin.
To see the best article on hiccup, the most scholarly and classical article, is to be found in the Dublin Journal of Medical Science, June 1873, by W. Langford Symes.

In all my investigations this article easily stands out prominent, and I am indebted to the author for following out his lines in my own reasoning, and for calling paragraphs from his excellent treatise.

Dr. Langford Symes' case is this:

An old gentleman, aged thirty-seven, of a gentle disposition, whose organs were structurally sound, his system, however, had been but seldom relieved by a regular attack of an acute nature, was subject to two ailments: one, occasional affections of the respiratory tract in winter—colds, bronchitis, or congestion of the lungs; the other on very rare occasions, a true arterial gout.

For six months previous to the following attack of hiccup he suffered from severe congestion of the lungs—now in one, now in the other—on one occasion, numbness and tingling in the left arm and leg from apparently some cerebral thrombosis, while the congestion of the lung gradually assumed a cæthritic character, with dulness and exposure of the base of the heart over the third left rib, accompanied by profuse glutinous expectoration. Within the last month the congestion became cleared, being succeeded by an irritating, dry condition of the throat and upper air passage, with, at times, distressing aphonia.

This, however, gradually improved, and one evening during his convalescence he commenced to hiccup. After a few it became distressing, and he was given some podii becarlindus without relief; salt was tried, but had no effect, also sal volatile and
ginger, but it continued all night unabated, while sipping water
and holding the breath were of no use. Next morning, there
being some considerable intestinal fulness, a purgative emulsion
of castor oil with laudanum was prescribed, and although free
purgation resulted, no improvement took place. See was
swallowed in lumps, and a mustard slice was applied to the
epigastrium, followed, like other remedies, by a bell for a short
time – the hiccup soon returning quite as voraciously. Raw
whisky would sometimes check it, suddenly and give great relief,
but for a time only. Chauterne, vinegar, and saw melon also
checked it frequently, but only temporarily, and if again continued
all night, even during sleep. Thefrontile shooer, mustard powder,
stimulating liniments to the diaphragm, were equally unsuccessful.
In view of its probably gouty origin, doses of bicarbonate of
potassium were frequently given in Vickly water which was
freely taken by itself. This seemed to have some effect, but on
close observation it was the mechanical act of swallowing which
was found to be influential, rather than that which was administered.
The mere swallowing of saliva several times in succession was
very useful, and still better was the patient being fed very quickly
with spoonful of arrowroot, hardly allowing him time to
swallow up – this, although unpleasant, became necessary to afford
relief. Still it returned again and again. Gargling with
voda and Vickly water sometimes stopped it, as did several
other remedies – e.g., chalk and brandy, ice to the epigastrium, to:
a spiral wire to the cervical region having no effect –
Thus it continued for eight days and nights almost incessantly.
Another most careful physical examination was made, and
revealed but slight congestion of the right lung behind, and left in
front, a quiet systolic murmur over the mitral area, a congested and very
dry condition of the pharynx, and a highly acid state of the urine, with
a very minute trace of albumen. Having a slight cramp in the right
foot it was frequently visited with mustard in the hope of determining
an attack of gout, but without avail. On again carefully considering
the case, it was concluded that the hicouh probably arose from some
oesophageal irregularity in the branches of the vagus, associated with
a calcarious state of the cardiac orifice of the stomach, gouty in its
nature, and that an attack of acute cutaneous gout would in all probability
clear it up, and on this basis the following mixture was prescribed:

\[\begin{align*}
R. Potassii bromidi & \quad gr. 7 \\
Potassii bicarbonatis & \quad gr. 15 \\
Potassii nitri & \quad gr. 3 \\
Chloral hydrat. & \quad gr. 5
\end{align*}\]

It be taken every sixth hour.

For the two following days it continued as before, apparently unabated
even during sleep, although several pericardial rosettes were useful in checking
it for a time. However, on the evening of the tenth day it suddenly ceased,
as it had done before, but did not return. The mixture was continued, and
after some days hinde of calciaria was substituted for the chloral.

On calculating the rate of the hicouh, and the number of hours during
which it lasted, I find that during ten days and nine nights it persisted
for 148 hours, averaging about sixteen hours per day at the rate of
twenty nine per minute, allowing with each inspiration—during
sleep sleep, however, it sometimes occurred only every fourth breath.

This gives us a total of 257,520 spasms, the depressing and exhausting
effect of which, in a debilitated constitution, is difficult to describe.
In Brain's "Newspoll," vol. 1, 1892, p. 245, Dr. Smart, in a case of tic-convulsions occurring in an adult male suffering from chronic alcoholism, after trying for four or five weeks to control the spasm, used inhalations of chloroform with success.
In the medical Annual of 1894 Dr. Gauvant reports a case of persistent hiccup due to gastric irritation which at once yielded to gastric lavage after the failure of drugs.
In the Medical Annual 1894, Wood is of opinion that in hiccough chloroform is probably next to quinine the most efficient remedy. It is not free from toxic properties for a single dose a tablespoonful gave rise in a case of his of persistent vomiting with diarrhoea and collapse.
In the Edinburgh Medical Journal, April 1856, Dr. Gibson of Edinburgh writes an interesting and amusing article on hiccough. This article is also quoted in Braithwaite's Retrospect of Medicine, year 1856, pages 163 and 164.

"Hiccough occurring after hiccough removes the hiccough," or, as it is rendered by Adams, "Hiccough coming on, in the case of a person afflicted with hiccough removes the hiccough." Familiar as I am with the aphorism, it never seemed to me that it might be made of use in the practice of our art until quite lately; and, as others also may not have thought of making any practical application of the observation, I venture to bring it before them anew. When devoting a leisure hour, as I sometimes do, to Plato's dialogues, as translated by Jouett, I was struck by a passage in the Symposium which had never arrested my attention before. Translated by Jouett the passage stands thus:

"When Pausanias came to a pause (this is the balanced way in which I have been taught by the wise to speak), Aristocles said that the turn of Aristocles was next; but that either he had eaten too much or from some other cause he had the hiccough, and was obliged to change with Bryximachus, the physician, who was reclining on the couch below him. Bryximachus, he said, you ought either to stop my hiccough, or to speak in my turn until I am better."

"I will do both," said Bryximachus, "I will speak in your turn, and do you speak in mine; and while I am speaking let me recommend you to hold your breath, and if this fails, then to gargle with a little water; and if the hiccough still continues, hold your nose with something and sneeze; and if you sneeze..."
once or twice, even the most violent hicough is sure to go.

In the meantime I will take your turn, and you shall take mine.
I will do as you prescribe, said Achates, and now get on."

As may be seen in the sequel, the hicough was not cured by the
first or by the second remedy suggested by Enzymachus, but
by the production of sneezing.

This part of the dialogue recalled to my mind the aphorism
which has been quoted, and I have brought it under the notice
of some of my friends. The method of tickling the nostrils
has been tested by me in cases of obstinate hicough, and has
been very successful. Hicough, as well as sneezing, is one of
the specially modified respiratory movements, and it is quite
in accordance with what we know of the transference of
nervous action, that the phasicic contractions of the diaphragm
should cease on the induction of the explosive expiration which
constitutes the act of sneezing. There is one point, however, which
merits special mention. It is not necessary that the stimulus
applied to the nose be followed by sneezing; the application
of a gentle irritant to the nasal mucous membrane may be
quite enough to put a stop to the hicough, by directing
the nervous energy into other channels, although it may not
be of sufficient power to induce sneezing.
At a medical meeting in Paris, Feb. 22nd 1896, Professor Lejune of Lyons discusses a case of a young girl who had for four days been afflict end with hiccup, the respiration being 30 per second. The girl was not hysterical, but complained of certain symptoms of dyspepsia. Asked to show her tongue she held the unsual member outside the dental arches for some time.

Struck by the reaction of the hiccup while the tongue was in its extended position M. Lejune maintained the fraction for several minutes, with the result that the symptom disappeared definitely.

This is not the first successful application of the method for the cure of hiccup, M. Trand having reported two cases in 1894.
In The Irish, des Ann. med. clav., July 1843.

A French practitioner has detailed several cases illustrating
the efficacy of galvano-puncture in nervous diseases.
A girl, twelve years of age, had been epileptic since her
sixth year, in consequence of a fright received at
that period; her fits were becoming more frequent. The
practitioner in this case adopted galvano-puncture.
A needle was placed in the integument of the epigastric
region, and another in that immediately beneath the
esophagus, and either was connected with the wire from a
collector battery. The first current was administered at
the time of an epileptic fit, and was followed by
an immediate return of sensibility. Next day another
current was administered, and for the ensuing week no fit took
place. On the eighth day a violent epileptic attack happened,
and this was repeated eight days afterwards, on which two
occasions the practitioner could not arrive soon enough to
apply the remedy. The patient was now removed into the
house of her medical attendant, who took advantage to
arrest the fit at its commencement by forcing the galvanic
circle, and no further attack ran its course until a month
afterwards. This was the last, from which time, for six
months following, the disease had not returned.

A young woman, subject to chronic gastritis had
been for two years tormented with hiccough, which
 persisted for an hour daily, and for which no remedy
had been found efficient. The galvanic circle was
employed, as in the above case, and the result of the first
few applications was so successful that the patient ventured to leave them off, fancying herself cured. This was a mistake; the hiccup returned, and the remedy had to be applied again daily for about six weeks, after which no attack took place.

Similar success attended the same treatment for hiccup after typhus fever, but in this case, also, the necessity was signalled for persisting in the use of the remedy for a period without interruption.
In the medical record, Feb. 23, 1875, p. 239, Dr. Parsons, Long J., wrote:

"A rather remarkable case of singultus came under my observation about two years ago. The patient, a dentist and a native of this State, had had melancholia for twenty years, and a few days before admission to the hospital had developed suicidal impulses. After admission, when the attendant removed the patient's sheet, it was found that the great toe of the right foot had been completely severed from the metatarsal-phalangeal articulation. After this operation had been performed, the patient had replaced the severed toe in its normal position to the foot, and had concealed the mutilated foot with his sheet and shoe. He had committed this act of self-mutilation three days previous to being sent to the hospital, but during this time had evinced no signs of lamenous, nor given evidence of physical suffering.

A few days after admission the patient developed an attack of singultus, which was repeated several times during the day, each attack lasting ten or fifteen minutes, the hiccup being as frequent as ten or fifteen times a minute. After a time the attacks became more frequent and more prolonged, and the hiccup became as frequent as forty per minute. Every remedy was tried that could be thought of to relieve this distressing condition, but to no avail. Rubbish of amy! and more quinine were, at first, of temporary value in controlling the attacks, but later failed to be of any service. The patient would not retain any food in the stomach and although nutrient and stimulating enemata were administered at frequent intervals, he became rapidly exhausted and died in about thirty-six hours after the onset of the first attack of singultus.

Whether there was any connection between the surgical injury previously sustained and the attacks of singultus is of course difficult to decide."
In the Rev. J. Thor. Med. Clerk, 1893, no. 3, p. 77, Dr. Hearn has reported the case of a man thirty-four years old, in which, in the third week of an attack of Secalecia, incessant hic-cough appeared, preventing sleep and interfering with the taking of food and drink. The sputum was nearly, high coloured, but contained no albumin. The temperature ranged between 101° and 102°. After the usual measures had been exhausted, it was concluded to apply percutaneous stimulation, in the hope of overcoming spasm and establishing diuresis.

Accordingly the man was every three hours placed for five minutes in a wet back. After the third application the flow of sputum increased and the hic-cough subsided. In all twenty-nine applications were made and the relief was permanent.

The view is expressed that the hic-cough was dependent upon an action upon the nervous system by the hic-cough of secalecia, upon the elimination of which, with the sputum, the symptoms disappeared.
For many years I have prescribed as the best known means to me against nervous angina pectoris muscarinicum in dose of 0.1 to 0.5 Wacher, 10 drops 3 or 4 times daily. I cannot say whether I found the prescription by chance or whether a hazy reminiscence from reading led me to it - I can only say this much, that few years in hospital and private practice I have tried in vain the most various prescriptions against this distressing and stubborn suffering - only once have I seen an exceedingly prompt but not then continuing result by an injection of atropin which had in error been prescribed for morphin. There was in a hospital a sick woman, who had spasm of the diaphragm so badly that the whole abdomen for hours rose up and down in great waves, at times even the whole body became convulsed. Relying upon this success, I tried atropin in other cases but I did not continue upon doses of even the allowed quantities, besides there was the consequence, namely the prompt stopping of the unusually strong cramps of the diaphragm for about 24 hours was somewhat spoilt by phenomena of intoxication. The dosage were been 0.1 mg. Later I came across pilocarpin up to now I had never prescribed it in acute case which often happen, as ominous signs strong abdominal pain and severe internal results, as with the physiological results of pilocarpin mostly relaxing and relaxing, are not to be desired. I prescribed this only in exceptional and chronic nervous or hysterical angina, and never in a stronger dose than given above. With the beginning of the treatment there was a visible decline of the condition both as regards violence and frequency, and by continued use of the prescription for from 1 to 3 weeks the condition ceased altogether.
In the Centralblatt für klinische medizin, August 13th, 1892,
No. 22, 8th of the month, edited, written,

On 27th January 1891, a European soldier was brought into hospital in Batavia, where the following was notified:

The patient, who had not studied for 8 days, complained principally of severe pains in the forehead and limbs, and further of difficult respiration and general depression. According to his own account, he was 21 years old, who had been a lead smelter, previous to entering the army. He had up to 16 years of age suffered from epilepsy. His sister died from this failing sickness, and his uncle still had frequent attacks of epilepsy. In the year 1889, during the influenza epidemic in Amsterdam, he had an attack of this sickness but had completely recovered from same.

On the night of the 8th February, he was suddenly seized with a severe attack of cough (hiccough). When I came to him, I could notice the following: He was in a somewhat high reclining position; his features were dull (exhausted), he bore a strange appearance, with the slightly cyanotic, Pulse 88, regular, full, very hard, Respiration 40. Inspiration and expiration irregularly appearing, heavy scratch of the diaphragm. On the right hand side of the Throat along the vertebral column, a slight moist expiration. On the following morning the patient, who had not slept, appeared very exhausted, the cyanosis was quite general, there was evidence of strong orthopnea.


To February. The condition of the patient is visibly changed, the cough (hiccough) has as good as disappeared. The patient manifests a strong sweat secretion, the bed being wetted.
through and the sputum flows out of the mouth.
17th February. The cough (herein after) I have gone, the patient bathed in sweat, there is still slight dyspnoea & cyanosis.
During the further development of the sickness it was noted that the subjective condition continually improved, the objective phenomenon soon disappeared and only a high degree of anaemia remained. The patient was further treated in a home in the mountains, where he six months later told me that he had had no more attacks of cough (herein after).
In the whole literature on jaborandi leaves and pilocarpin, for a full list of which we have to thank Laveran, I find only a few cases of convulsions mentioned in which jaborandi leaves or pilocarpin have been prescribed.
Küche applied with remarkalbe effect a mixture of jaborandi leaves 8,100 in a case of cough (herein after) which had incessantly continued for 6 days and 6 nights after different depressants had been used. Fussling, practicing doctor in Balavna, had the fortune to cure with my prescription, a person, ill with influenza, who had been tormented with convulsions for 7 days and 7 nights.
In one case of epilepsy it is worthy of note that with an exceedingly exhausted, cyanotic patient after the application of jaborandi leaves the heart movement remained most excellent, all the more so, as after pilocarpin collapse so often occurs.
It is impossible at present to decide what ingredients of jaborandi leaves may be the effective principle against convulsions.
In the Revue mensuelle des maladies de l'enfance, March 1893
M. Lebois before the Academy of Sciences discusses the treatment
of hiccup by digital compression of the phrenic nerve.

He says: "Two years ago I was consulted by a little child
of 12 years old who was suffering from an uncontrollable
hiccup every half minute which interfered with sleep,
the nutrition, and the general being of the child. Several
other doctors had seen the child, and had in vain prescribed.
The idea came to me to compress forcibly the left phrenic
nerve between the two sterno-clavicular attachments of the
sterno-mastoid muscle. The severe digital compression
lasted three minutes. At the end of that time the hiccup
had completely disappeared, and I was very much
surprised to find it did not come on again.

I have since then frequently applied this method in cases
of chronic hiccup resisting all other treatment, and have
succeeded in making the hiccup disappear on compression
for some minutes, sometimes only seconds in certain cases.
This method is simple, so practical and so available
constitutes an interesting application of the researches of
Brown Sequeran on inhibition."
In the Revue méd. de l'Est, Jan. 4, 1885, Ligeois has described a case of intractable hysteric in a nervous and irritable woman aged 21. The paroxysm lasted twenty-four days, and was so violent that the whole body was shaken, and the noise could be heard at a distance of forty yards. Bonade of potassium and other had been given without success; chloral and hyoscynamine produced a temporary improvement, but the paroxysm reappeared after a time. Lepine and allopurin were then administered, and the hysteric ceased for about a month, when a new attack occurred. Two months later, a small abscess formed in the epigastri region, and a needle which projected through the skin, was extracted by the patient's sister. An incision was then made by Ligeois, who found eight other needles in the subcutaneous tissue. The operation was followed by a complete cure, but the author is unable to state whether the needles had been swallowed or introduced under the skin by the patient herself.
American Opinions
Some of the cases recorded by our American confreres on this subject are singularly interesting and peculiar. By others the subject is treated in a most extravagant manner, and there seems to be the popular delusion that there is some magical remedy which can be found and which will immediately stop the spams.

In New York the daily papers frequently report prolonged cases of hiccough and advise a careful pathological idea of the disease is abandoned to mockery and is treated by quackery and the knowledge of the mob.
In the New York Medical Record, June 30th, 1836, Dr. Burns reports two cases of very obstinate hiccup, in which, after various remedies had been tried in vain, the hiccup was arrested by firm compression of the heaving ribs made by means of the hands.
In the New York Medical Record, July 21, 1883, Dr. Shaw of Cincimati states that he has often succeeded in stopping haemorrhage by following Dr. Kennard's procedure.

Treatment:—This method was to place the tips of the fingers of both hands in the position of complete supination against the abdominal muscles, at the lower and outer junctions of the epigastric with the hypochondriac regions. With the finger tips in this position, firm and very gradual pressure is made backwards and upwards against the diaphragm. This pressure should be continued for some little time after the diaphragm has ceased its spasmodic contractions, when the fingers should be very gradually withdrawn.
In the New York Journal, September 19th, 1895, Dr. C. J. Schuyler records a case in which a phthisical patient, who had previously suffered from angina pectoris, was cured of a persistent hiccup of 9 days standing and intractable to all ordinary treatment remedies by the ministration of a one per cent solution of nitroglycerine twice daily.
In the Boston medical and Surgical Journal of March 5th, 1874, there is a report of a case of death from hicouph.

The patient was a bartender, aged 33, at Newark, N.J., and had suffered from hicouph continuously for thirteen weeks. After a number of remedies had been tried to no purpose, the following operation was undertaken as a last resource.

On the hypothesis that the source of the trouble was irritability of the inferior dental branch of the inferior maxillary nerve, communicated to the pharyngeal nerve, the inferior dental was cut down upon and divided. Some temporary improvement in the patient's condition followed this procedure, but the hicouph soon returned. The only thing that seemed to be of any use in controlling the paroxysms was ice cream, which the patient took freely. He gradually became weaker, and finally died of exhaustion. When first seized with the affection the man was strong and robust, and weighed 160 lbs., but just before his death his weight was only 81 lbs. No mention is made of a post-mortem examination.
In the Maryland medical Journal of February 25th, 1897

Dr. Louis Kolopinski of Washington records a case in which persistent hiccup was immediately checked by depressing the tongue. The patient, a man 59 years of age, began to hiccup on Dec. 14th, 1898. The next day he was not able to take his meals or to work at his trade. He slept but little, the hiccup being so violent that his bed shook, and he passed the night mostly sitting up. During the next three days his state continued the same; on Dec. 17th and 18th his throat felt swollen and full, and he was in dread of death by suffocation. On Dec. 18th while Dr. Kolopinski, in order to examine the patient's throat was pressing his tongue downwards and backwards with the handle of a large spoon using continuous steady force the hiccup suddenly ceased. An hour afterwards it returned, but the patient placing himself in front of a mirror stopped it by using the spoon in a similar way. Two days later it reappeared but was promptly arrested by the patient as before.
In the American Journal of the Medical Sciences, November 1875, p. 299:

Depuytren cured two violent and obstinate cases by use of the actual cautery applied over the extrophic cartilage.
In the American Journal of the Medical Sciences, April, 1871, Drs. Leavitt and Beauchamp drew attention to the successful employment of the hydrate of chloral in singultus, and give the history of one case and allude to two others, which were cured by this drug.

The principal case recorded is that of a gentleman, aged 60, who had long suffered from an obscure disease of the nervous system, and whose sufferings were aggravated by the superimposition of an obstinate and distressing hiccup. They, bromide of potassium, must, camphor, &c., were tried in vain, but the chloral hydrate, used in solution, in five grain doses, almost immediately arrested the singultus, and never afterwards failed to counteract the spasm in a most satisfactory manner.
At a meeting of the St Louis Medical Society in the winter of 1889:

A case of lues was exhibited that had been active for twelve years, and still proved refractory to all treatment.
In the Philadelphia Medical and Surgical Reporter, vol. 1, 1876, page 190, Dr. Frueh report:

a case of liebough in a married female suffering from "excavation at the fossa vaginalis uteri with a curett" which ceased only after the glandular affection was cured after a treatment lasting three months.
In The Philadelphia Medical and Surgical Reports, vol. 1, 1880, p. 155, Dr. Niel reports two cases of hiccough, one in a male aged thirty-five, following an attack of syncope. It continued for many months in spite of the use of "the web of the black spider" and ultimately wore itself out; the other in a female, aged forty, who for twenty years has been afflicted with some obscure form of spinal disease.

Among the remedies used in the second case may be named quinellea robusta, lupenturii, chlorinated soda, stoffman's antyoce, esphedrum, bicarbonate of soda and oil of amber. The hiccoughed fourteen weeks out of seventeen, and no result of the case is given.
Dr. Warren of Danville, Kentucky, recommends: "Hold the breath as long as possible. The tracheo-bronchial tree is held in abeyance until the pneumogastric, which is off its guard, can get back to its post."

This method is in line with Cruveilhier's, which consisted in pouring water into the patient's mouth until he was about to suffocate. It may also explain why forcible expiration, cold drenches, sudden alarm, sneezing, straining with the glottis closed, and Canavansne's forcible flexion of the head upon the chest for five or ten minutes at a time, are all occasionally successful.
In the American Journal, 1898, p. 636, Dr. Fauvel reports a case that lasted three weeks and which abated under tourniquet pressure over the epi-gastrium. Morphine, the actual cautery, musk, quinine, chloral, to be of no use.
In the American Journal, vol. 2, 1879, p. 443, Dr. Barr reports a remarkably persistent case in a male aged forty-five suffering intense grief. Everything imaginable was done without success.

Treatment: At the end of two years, and for the mere sake of doing something, an esophageal probang was passed. This caused a syncopal attack, but cured the hiccup.

Lancashire employed the same measure.
Dr. Jones of New Orleans has found that parakism is best in asthenic and galvanism in atonic cases.

A young lady troubled with chronic gastritis bruised for an hour daily, which yielded only to galvanism on the forty-second day.
A case of haemorrhage after venous removal had been
brought in, possibly yielding to the employment of
sympathetic.
In the New York Journal, March p. 267, Dr. Corson related
a very interesting case, in which a most obstinate hiatus
was due to diaphragmatic pleuric pneumonia, and was pretreated
during three weeks, the patient having no sleep for nine successive
days. When the affection is connected with inflammation or
low types of fever, it is a very serious affair for the patient,
and a source of great anxiety to the practitioner.

Where it is purely nervous, musk and castor constitute the
best treatment. Dr. Peaslee has seen the affection arrested
by fifteen drops of chloroform given in mucilage every twenty
minutes. He thinks there may be made three divisions of
hiatus: 1. From general nervous irritation. 2. Extensive
degradation of the nervous system from want of vital energy.
3. Local irritation of some part contiguous to the diaphragm,
generally the stomach.
This extract is from a New York paper.

Theodore H. Reed, a stenographer, living at 175 East Eighty-seventh Street, had hurt his back for seven days. He tried twenty-five remedies and four doctors. Then he was cured by diluted nitrohydrochloric acid, used in conjunction with a sedative and a soporific mixture.

He returned to work on February 18, with a slight attack of backache, and the next day he was worse and was obliged to leave the office. He called on a physician, but the prescription he received gave him no relief. Then he called in two more physicians who began on him a series of experiments he will never forget. This is the gamut of cure he went through: lemon juice, sugar, vinegar, oil of cinnamon, aspirin, pills, alum, cream of tartar, extract of witch hazel, hot milk, holding the breath, holding up the arms and drinking warm, hot water bags on stomach, and hot water internally, cracked ice, bandages saturated with cold water laid around the neck, morphia, bromide of potash, rubs, applications of hot sand, tea of balsam and peppermint, electric shock applied to stomach, spirits of ammonia, camphor, must, drinking water with a steel knife in it and salt.

All East Eighty-seventh Street heard about the young man's affliction and persons with recipes flocked by day and night to his aid. The young man had about fifty more remedies to select from when the fourth physician called in last Monday gave medicines that stopped the backache in half an hour.

The first dose of fifteen draughts of diluted nitrohydrochloric acid did the work. This was followed by a soporific medicine, for the dose he had taken had deranged his digestive organs. Then bromide of potash and liquid of chloral brought sleep, for Mr. Rockett had not slept for three or four days. He will return to work today.
Mr. A.C. Gallant, attending physician, Northern Dispensary, New York.

In the Medical Record, August 19, 1893, p. 234.

On June 1st, 1893, A. H., aged twenty-three, single, German, night baker, was referred to me at the above-named dispensary giving the following history: On May 27th he had pain and fulness in the head, with constipation. The next morning he had no appetite and took only coffee for breakfast; he omitted three meals during the morning, taking soup only at noon.

At 5 p.m. he ate a piece of raw tongue, which was vomited about a half hour later. At 6 p.m. he ate a pickled green pepper, and soon after felt weak and dizzy. The body was covered with profuse perspiration, and he was aroused with frequent paroxysms of lightheadedness. These attacks occurred through the night and for the two following days (except when asleep) and were now repeated every minute or two, being only relieved for a brief period by drinking soda water.

The patient is of robust build, phlegmatic temperament, appetite and digestion usually good, and is feeling well in every respect except some pain in the epigastrium, and the annoyance caused by the lightheadedness.

The case impressed me as one of gastric origin, but having no stomach tube at hand I ordered peramine hydrochloride six eighth grain every three hours, and magnesia sulphate, half ounce, once. This gave almost complete relief until June 3rd when the paroxysm began again. I then ordered pilocarpine hydrochloride five ten grain three times daily as recommended by Helles. He did not lightheaded during the day (June 4th) but suffered severely from it during the
night. June 5th. Still hiccupping and has vomited a
greenish-yellow fluid, with much tenacious mucous, four
times during the twenty-four hours. The diet was limited to
milk and rice. June 6th. Did not work last night.
Although it almost as bad as ever. At 5 pm, the stomach
was washed out, requiring three quarts of warm water before
the return fluid was clear and free from particles of
undigested milk and very tenacious mucous. There has
been no recurrence since.
On June 5, 1893, A. B. m. aged thirty-six, consulted me about a persistent singultus which had continued for forty-eight hours. I was unable to discover the cause as it came on in the morning immediately after rising, and continued so long as he walked about - he could not eat, as deglutition provoked the difficulty. I saw somewhere a recommendation that full doses of pellagra purée be given, and I gave him a one third grain tablet of Wysell's make. He was advised to go home and go to bed which he did. Free diarrhoea occurred in a short time. He remained in bed one day, and has had no return of this distressing trouble.
In consultation with two other physicians, who had been in attendance for several days, I saw patient B, aged seventy years, but remarkably well preserved for one of his age, and had been doing manual labor regularly up to the time he was taken with hemorrhage.

The various household remedies were tried without relief, when, after several days, the physicians were called.

They had used faithfully the drugs usually given in this condition — mustard, terebinth, chloral, opium, &c., without even temporary relief. Hemorrhage continued under profound narcotism, and when I saw the patient at expiration of ninth day, he was thoroughly exhausted, and oblivious to all surroundings — it was found upon examination that the bladder was very much distended. I introduced a catheter and drew off a large quantity of highly colored urine, when immediately hemorrhage stopped, patient resting quietly for eight or ten hours, when hemorrhage returned.

Tongue was covered with a very thick spongy coat, and as dry as a bone. This fact, taken in consideration with the treatment which had been used without relief, led me to conclude that the case had its origen in the stomach.

I had recently read in some journal, where after all other means had failed, a case was relieved by thoroughly washing out of the stomach.
A stomach tube was attached to the Allen Surgical Pump, and stomach thoroughly irrigated with warm water. Stomach contained no food, but a quantity of dark tenacious mucus, without patches of separated mucous membrane, some of them as large as a finger nail, and very much thickened. Nervousness did not return, and patient recovered his usual health.
On February 5th, 1874, Mr. B. J., a young man, about thirty-three years of age, single, came to my office for treatment, complaining of dizziness, no appetite, lack of ambition, and tenderness in the epigastrium. Almost immediately he was taken with severe pain and distension of the bowels. I prescribed magnoxia night, one ounce to be followed by small doses of cocaine without any benefit.

In the afternoon of the 5th, I determined to wash out the stomach, which I accordingly did, but without any favorable result. He could eat very little, and the food disturbed him. No sensation during the night or next day, in spite of pectoral and various other remedies. In the evening of the 6th I gave the patient halmiri iodi 35; bromthylla 120; gr. x.; 1 dr. tincture iodi; this had no effect. Controlling them for the night, but early next morning, February 7th, they began again as bad as ever, the uneasy of the night before did no good, and the patient was rapidly becoming exhausted, could not eat anything. I gave morphia in the evening, which gave the patient little snatches of sleep, temporary respite from distress but ultimately failed of the desired result.

On the morning of the 8th they were as bad as ever. I began to despair of giving any permanent relief with the various medicines. A happy thought took possession of me at this juncture.

I had some oatmeal porridge made for him which I served with milk. This was on the afternoon of February 8th. Quickly he coughed a little, recovered a little, and was doing fairly on an oatmeal diet.

It was of gastric origin, due probably to the irritated mucous membrane. This is what I believe a rare remedy, but it deserves a further trial by all practitioners who meet with this obdurate affection in their practice.
Dr. Henry Levison of New York relates in the Medical Record
Jan. 5, 1875. p. 17. three interesting cases.

CASE 1. Miss B., aged twenty-two, occupation house work. On the previous evening she was taken with hiccough, which would come on about every fifteen minutes and continue for three or four minutes at a time. She did not sleep the whole night and wore an anxious and tortured look. All domestic remedies tried were of no avail. I elicited the history of neurasthenia in her maternal side, she herself had frequent though slight hysterical attacks, and suffered greatly from dysmenorrhea.

This case yielded within a week to sedatives and antispasmodics, and isolation from her friends and relatives.

CASE 2. Miss M., aged nineteen, short-sight, very anemic and emaciated. During the last three years she would drop in to see me when an attack of "delicerness" annoyed her too much. The last time she called on me was on account of an intolerable hiccough. It was indeed of a violent nature, and coming, as it often did, simultaneously with an exhalation of gases from her diseased stomach, the cough could be heard at quite a long distance. Believing the case to be of purely gastric origin, I determined upon lavage and resorcin internally, as an antiseptic.

Within four weeks I used fifteen irrigations of her stomach, adding first sodium bicarbonate, later croscite to the water, when the disease abated, and she had fully recovered.
Case 3. Mr. A., aged fifty. He met with an accident, being run over by a heavy express wagon and receiving many contusions and wounds which were stitched up. Sedatives were required on account of the shock, which acted heavily upon him. I could not detect any internal injuries. On the fifth day Mr. A. developed a local peritonitis in the left hypochondriac region. At this stage Dr. A. Brothers was asked to see the case with me, and he, coinciding with my opinion, did not detect any other ailment. Ice externally, and opium in full doses internally, checked the further spread of the disease, and on the fourth day the patient felt well, and both ice and opium were discontinued. An abscess which formed in the patient's knee kept him in bed, otherwise he seemed on his way to a full recovery. One morning (three days after I discontinued the opium) when I called to dress the wound, I found him afflicted with hiccough which followed one another in quick succession, naturally neither food nor sleep could be indulged in, and in consequence Mr. A. was very much exhausted. There could be no gastric trouble, because his nourishment consisted of fluids in small quantities, nor could there be any special nervous element in this case, as he and his family were always in the best of health. Prompt relief was necessary, as my patient was sinking. Eventually I picked up a medical formula, and finding in it iodine hiccough, I was too anxious to find the panacea against this dreadful disease. What I found was iodine, recommended by Dr. Godward, to be given in the grain dose.
every hour. As I had tried nearly everything but calomel,
I hurried to my patient and prescribed the last remedy.

I was delighted when the report came, that after the
fourth dose the trouble stopped entirely—and it did not come
back. Where was the seat of the malady in this case,
and in what way had the four minute doses of calomel
exerted such a happy influence in cutting short this attack?

Comparing the three cases reported, I am inclined to believe
that besides the typical singularity, which is only a sympton
pure and simple, there exists another form of it which is
a disease forse, the etiology of which is not yet known.
In the Medical Record, July 3, 1897, p.16. Dr. Luke Fleming of Savannah, Georgia.

In view of the serious cases of hiccough reported from time to time, I am led to give the history of the following case and also the treatment employed, in the hope that it may be of benefit to others.

A.M., female, fourteen years of age, fairly healthy and of good family history, was attacked on the night of May 3rd with hiccough, the attack consisting of three or four paroxysms of half an hour's duration each, which ceased on the following morning.

Towards the afternoon of the same day the paroxysm reappeared, increasing in severity until in the evening the exhaustion of the patient frightened the parents, and I was called on. At this time she had been hiccupping continuously for two hours and had just recovered from an attack of syncope. During the pain the hiccup ceased, but returned upon her regaining consciousness. Her temperature was normal, pulse rapid, feeble, and irregular, and her general appearance that of extreme prostration. While watching her I remembered her as a patient who at one time I had treated for malaria, and in whom quinine had caused a most unbearable astheniac.

It occurred to me now that if I should again prescribe quinine and induce the malaria I might so disturb her nervous system as to cure the hiccuph. Acting upon this thought I gave her grains of the drug. During the ensuing two hours her hiccup grew worse, and her condition became so alarming that the parents feared death. At the end of that time however, a scarlet rash spread over her body, her fingers and face puffed, and an intense itching came on.
At the onset of this rash the hiccough promptly ceased, and although but one dose of quinine had been given and the rash lasted only three hours, the hiccough did not return.

In thinking of this case it shews me that the treatment of hiccough by new remedies is unsound, and that a more rational treatment would be by new stimuli. If I may use a figure of speech, we might compare the nervous system of a patient suffering from hiccough to an insolent garrison in an enemy's country allowing a crazy gunman to exhaust all its ammunition by giving salute to the air. By throwing a shell into its midst, we awaken it from its lethargy and stop the foolish paste. So, in a case of hiccough, the nervous system is not attending properly to its duties and is exhausting its vitality in a harmful direction. By employing some means that will in a thorough shaking up, we awaken it to its danger and restore its normal action.

In the above case this result was obtained by the idiocy remedy of the patient to quinine. In other cases, we might seek some like condition and utilise it.
Prof. Charles G. Stockton, Professor of the Practice of Medicine,  
Buffalo University, in an address, February 24th, 1893, to the  
Buffalo General Hospital, says:

Patient, Bertha W., began feeling ill five days ago and  
commenced heaving; this has been kept up continuously  
ever since, in spite of the remedies of three physicians who  
attended her before she entered the hospital. She has not  
visited, nor has she eaten anything since admission, two  
days ago. Here has been intense headache since the heaving  
commenced. The bowels are habitually constipated. She was  
given a high enema containing ten grains of opium, and  
has had twice daily and twice each night high enema of  
mucoceps and rhodanid. Morphine has been administered  
in doses of 0.5 increased to 0.75, and repeated as soon  
as the heaving would begin again. Last night she slept  
four or five hours without heaving; but again began as  
soon as she awoke. To-day she has taken a little milk.  
The affection is a form of neurosis, technically known as  
angina phlegmonosa. The elements of hysteria seem to be present.

Dr. Stockton goes on to discuss the various causes of heaving and says,  
how we have a young German girl who has lived for several  
months amid unfamiliar scenes, and among people speaking a  
strange language, who has been excited and exhausted by the  
illness and death of her brother. You can readily understand  
the predisposition to some form of spasmodic trouble. You can  
also understand how the heaving once set up would tend to  
continue, and how it would wear out the patient's strength,  
and render nourishment difficult, if not impossible. By
gradually weakening the heart, even lucidity may put an end to life, and the condition in this instance has been considered so serious by several physicians that, after doing their best to improve the girl's condition in her lodgings, they have sent her to the hospital in order to have everything possible done for her. While I have been talking you have noticed the continual breathing. You may not have noticed that the colour of her hands was improving, and now, on feeling her pulse, I find it has become stronger, probably because appearing before you has excited her and stimulated her circulation, and partially counteracted the effect of the morphine. A careful examination of the reflexes is impossible as she holds the legs firmly, and is evidently too much excited to relax them. At several points in the face, hands and feet there is insensibility to the touch of a pin. When she entered the hospital several anaesthetic areas were noticed on the left side, and the left conjunctiva was also anaesthetic.

The treatment should be directed to control the fever, and meanwhile to control the hysteria. For the latter I do not think there is any one drug that will compare with aseptin or for controlling the symptoms, or, in fact, the disease itself. In any case of hysteria I advise giving aseptin in large doses. If the patient cannot or will not take aseptin by the mouth give it by the rectum. It is in this way that this patient is being treated, with the object of controlling both the symptoms of sunquelles and the hysteria.
Mr. F. when wrestling on March 15th was thrown striking his head against a wall. The following morning he consulted a doctor with regard to his fallen prostate. In the afternoon hicouugh commenced and continued six days, when I was sent for. I found the man hicouughing twelve to fifteen times five minutes, with a swollen and worn out expression of countenance.

And there was quite an array of medicine near by, instead of giving a prescription I applied my thumbs to the supra-orbital nerves and within three minutes the hicouughs were completely checked. They returned fifteen hours afterward, when pressure was again applied and the hicouughs were suppressed for nine hours. The third and last time pressure was applied the hicouugh disappeared to return no more.
In The medical & Surgical Report of the Presbyterian Hospital, New York.  Vol. 111, Jan. 1887, p. 157-190.  Dr. Andrew H. Smith writes,

"J. H., aged forty five; private patient; admitted to Presbyterian Hospital, April 8, 1877.  Present illness began April 5, when, while at dinner, he was seized with hiccough, which has continued up to the time of admission with occasional intermissions during sleep.  Patient has no idea as to the cause of the attack.

Hiccoughed continuously until 8 p.m., when he fell asleep.  Slight relief was obtained by inhalation of amyth nitrite.

April 9.  Still hiccoughing; subglycineum was next tried and five drops of hynarine of capsaicum every hour, then chloroform, codex, frinal.  Patient complained of sore throat and pains in the left ear.

On April 10 an ice bag was applied to epigastria region and to back of neck, and was there for 6 days after which time the hiccough ceased.

The point of interest in this case is the prompt improvement under the use of ice applied as nearly as possible to both the region and the distribution of the phrenic nerves.

The aggravation of the pain in the ear caused by the movement of air through the eustachian tube with each spasm of the diaphragm was a feature in this case which I believe has hitherto not been observed.  Had the hiccough continued it would probably have added to the danger of closure of the middle ear.  

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In the Denver Medical Journal, Feb. 1899, Vol. XVIII, No. 8, page 399, Dr. W. A. Jolley, Rawlins, Wyoming, reports:

We are all so familiar with the 'lie' of the awkward that the following history of a case of hiccough may be of interest to you, for a contrast.

Mrs. L., aged 26, Rubian, married, three children, and had miscarriages, had had pain in right chest for several years and at intervals spits blood. August 12th began to spit blood and complained of severe pain in right chest. The next morning began to hiccup, six to ten times in rapid succession, stop for two minutes, then start again. The intervals of rest were never over five minutes unless the patient was completely under the influence of bromide and morphia, which the attending physician prescribed.

Prescribed antipyrine 7/2 grms every three hours; ammonium chlorid 15 grms in milk, glysc. com. 30 grms every three hours. Ice bags were placed over pain in right chest and over stomach, but no relief was obtained. mustard plasters were then applied but gave no relief.

Gave her morph. sulph. 1/2 gr., alum. sulph. 1,300 grs. strychn. sulph. 1/30 gr., and inhalation of 10 grms of menthol dissolved in 2 drams of chloroform during paroxysms. Intervals of rest lengthened, and she was able to sleep but on awaking the hiccup started as bad as ever.

Gave 2 comp. cathartic pills, inhalation of menthol in chloroform, and antipyrine 7/2 grms every one and a half hours. Intervals gradually lengthened. She had an occasional paroxysm for several days.

As to the cause, I am unable to determine.

Six months after patient again sent for me, said that she had taken cold and was afraid she would have another attack of hiccup.

Prescribed an expectorant unsuccessfully. Antipyrine was administered after an active cathartic and paroxysms stopped.

Within the last few months, a new and continuous form of hiccough has appeared, unaccompanied by organic disease or surgical malady.

The medical history of all these cases I cannot substantiate, but I know all were continuous and inextinguishable, and in several instances caused death. Some cases were treated in the hospital, others at home, with meager results, and most were looked upon as excessive forms of ordinary hiccough, when probably the disease was a new manifestation of nerve disturbance. Measured by some functional nervous,

Case 1. History. J.B., bartender, aged twenty-eight. For years previous to present disease, on being shaved by his barber, he noticed that when the razor touched a circumcision spot on the side of his chin, at the edge of the inferior maxillary bone beneath the mental foramen, a fleeting sensation instantly brought on an attack of hiccough. This happened repeatedly, but the reflex action never continued longer than for a few seconds. He always could check it by the usual domestico remedies, as sipping water, holding the breath in. The last and fatal attack began after he had been shaved, and lasted two or six weeks, after which he died of exhaustion. The hiccough was almost continuous, except during sleep and for some periods to which this brief sketch particularly refers.

It would be waste of valuable space to add any of the extraordinary remedies suggested; suffice it to say they all failed.

The medical treatment for days was as hopeless, and in this department few remedies were left unused. One medical gentleman suggested the stomach tube, which was eventually
the only means by which a short respite could be obtained. The use of food in any form, after being swallowed about half an hour, caused the patient much distress by augmenting the bocough that he anxiously introduced the tube or artificially produced vomiting, for, when the stomach was emptied the bocough weakened. I saw the case many times and healed pressure on the phrenic in the neck. This lessened the bocough very much and allayed the spasms of the chest, but on removal of the pressure the phenomena returned as vigorously as ever. I then strapped the lower ribs, which apparently lessened the spasms, yet the patient complained that they had not subsided internally. Therefore pills were next administered, and much relief followed; but this was not sufficient to cause a sudden disappearance of the trouble, which the patient and everyone thought was to be obtained by some mode of action or drug.

After this the patient continued to bocough and grow weaker. Rectal alimentation did little to retain his strength. About six weeks later, an operation was performed on the visible spot in the cheek, but failed to cure, having no specific effect in lessening the frequency. On a second visit to the unfortunate fellow I observed that he was losing all his strength, and was very exhausted and wasted. As a last resource I tried massage, and to my surprise, after working gently at the toes and lower extremities for a brief time he complained of an indefinite feeling about the epigastrium region; presently he pitched up some greenish watery fluid, and the bocough stopped immediately.
The interval lasted twenty-four hours, when it began again. The man now despised and sank spiritless in his bed. Being called again I tried the same remedy with instantaneous success. He recovered stopped two days, then returned. I saw him again three days later, and massaged him all over; again instant relief followed, and he remained free from the attacks an entire week, at the end of which time they resumed. I saw the case no more, as now he submitted to all kinds of treatment, plus an operation.

One week later he died of exhaustion, no autopsy.
In The American Journal, Dec. p. 609, Dr. Josselyn writes:

"After trying all ordinary remedies without avail, I fell back upon a household remedy as a last resort, and ordered a teaspoonful of pulverized sugar mixed with an equal volume of wine and vinegar, to be taken at one dose. The cough stopped immediately and did not return for six hours, and then ceased after a second dose of the remedy."
In the American Journal of Medical Sciences, Dr. George P. Salmon, of New Lebanon, New York, communicated: a case of angina which persisted for five days, resisting various antispasmodics, stimulants, &c., and which was entirely relieved in five hours by the administration of eight drops of Jelden's extract of cannabis. Indeed every hour—Dr. Salmon states that he has used the same remedy beneficially to check the paroxysms of asthma, and has found it valuable in hysteria, and in the nervous irresponsibility resulting from various mental disorders.
While a resident physician in Cook County Hospital, Chicago, the following case came under my care of which I find I have complete notes.

F. S., a Russian pedlar, aged twenty-seven, was admitted to hospital about 30th June, who had been bleeding for a week and was thoroughly exhausted from loss of sleep and the pain and soreness produced by the constant constrictions of the diaphragm; the usual remedies for these cases, such as morphine, bicarbonate and chloral, ether, camphor, indeed, benzoin, soda and a bichrome were each tried, but with little or no effect. Morphine in large doses would relieve for one or two hours and allow the patient some sleep; electricity applied to the epigastrium and to the phrenic nerve was of no avail.

On examination of the region of the stomach that organ was found to be considerably dilated and to contain a large quantity of fluid; there was no external sign of tumour or other physical dilatation; thinking of the dilatation of the stomach and the retention of fermenting food might be a cause of the headache, I introduced a suction-tube into the stomach and thoroughly washed out that organ; at least five quarts more of fluid were removed than had been introduced through the tube, and that which was removed was in a high state of fermentation. After this operation the headache entirely ceased and the patient had his first good nights' sleep in weeks. He was discharged two days later with no return of the trouble.
In the New York State Medical Association Journal, 1885
Vol. 8, pp. 139-147. - Dr. Frederic W. Putnam of Monroe County wrote:

Although may occur as a single symptom in the adult, independent of any disease or mental condition, and without any known cause. These cases may be very simple, lasting only for a brief time, or they may be very severe, lasting from a few hours to years. A case of this kind is reported in St. Louis which resisted all kinds of treatment for twenty years, the patient being a married lady. The husband finally secured a divorce, partly on account of the persistent hiccup.

It may result from direct irritation of the phrenic nerves and diaphragm. These cases are usually severe, and of course are not easily controlled so long as the exciting cause remains in operation.

It may be the result of reflex irritation. The irritation may be a strangulated hernia, or some morbid condition existing in the abdomen, the pyloric gland, or other distant organ. These cases do not always yield readily to treatment. A most persistent case of this type was finally cured by the formation of an abscess in the epigastric region, from which a number of needles were removed.

It may also result from irritation of central origin, either in the upper part of the cervical portion of the cord, or the medulla.

A very superficial study of medical literature will convince the most skeptical that the more difficult a disease or morbid condition is to cure, the more specific will be advanced by conscientious practitioners for its alleviation.

Science is treated with having stopped hiccup by magnetism.
Dr. Hobley Burglevin in commenting on the fact, indicates that its
application is limited to those possessing highly immoveable habits, and to its effect upon the imagination. If a hypodermic injection of clear warm water will stop severe pain, through the belief on the part of the patient that a liberal supply of morphia is dissolved in the water, it is not unreasonable to suppose that morphia, or any form of mysticure treatment, will prove sufficient in susceptible cases.

Dr. Stitham goes on to discuss all the various treatment of hiccough which here is no use going over again. He then says, in a professional friend related to me the history of an interesting ease, in which the application of dry cups along each side of the spine, near the attachments of the diaphragm, produced prompt relief.

A somewhat novel and ingenious procedure, which, as far as I know, is not copied hitherto, and which, like many other plans of treatment, is said to have been “tested many times without a failure,” is as follows: Say to your friend something like this: “See how close together you can hold the tips of your fingers without touching. Now keep your elbows out far from your side. You can get your fingers closer than that. They are touching now. Then, now, hold them to. Ready!” Withdrawing the attention of the patient together with the slow breathing necessary to perform any delicate manipulation explains the mode of acting of the measure, and often succeeds.

Dr. J. W. Kitchen of New York recommends spraying the posterior wall of the pharynx by means of an atomiser, using only pure water in cases of infants.

A most obstinate attack of hiccough is reported in a case of delirium, where morphia, chloroform internally, morphia and alcohol,

On April 4th 1889 I was called by my manby to a paralyzing girl of eleven years, whom we found vomiting and screaming with pain, referred to the epigastrium, and also breathing continuously. The pain described as heavy and burning through to spine which was somewhat tender. It was relieved by heat, or opium or anything, but, to some extent, by distracting the attention, and the hiccup ceased at sleeping time for the night, to recommence next morning - i.e., symptoms inconsistent.

When the attack began three weeks before, the tongue was foul, and gastric twitches - possibly worms - were thought of, and prescribed for without relief. W. Wilson Moore had then suggested bromides with valerian: 10 grains every two hours, had been given for some days, and now the complained of impaired sight in the left eye, impaired hearing in the left ear, and impaired power in the left hand. The chief symptom - persistent pain - suggested to me as neuralgia of the spinal plexus in a hysterical girl (a twin born prematurely of neurotic parents), and I dosed galvanism of the plexus, butyl chloride I g. q. h., with liq. resolutionis 3 min. as frequently as tolerated. Some relief followed for a time, but by April 10th the symptoms were as bad as ever, and it was agreed to remove her from a sympathetic family circle though nurse had been in charge - to the
Alexander Children's Hospital. Compresses and warm
sitz baths were ordered, with grey powder and rhubarb p.n.,
light diet, dia arsenic and belladonna in vin fever and
maltine tried.

Two weeks later patient had kept rather better, but with marked
relapse of pain and hiccough after visits from her doctor
or patient, so visitors forbidden. She had been up and
about and interested, but now said she could not walk,
and hiccup recurred constantly during day. Ordered
hypodermic pilocarpine 1/2 grain, without definite effect,
and although the hiccup ceased for the moment, it recurred
as soon as any official entered the ward. She still complained
of pain in abdomen.

From May 15 to May 25th pilocarpine was given hypodermically
daily with good results. On May 25th she began to take
it by the mouth, and continued so in varying but full
doses until June 6th, when she was discharged. Practically
well, and remained so. When last heard of

The case seems worth recording on account of its early
severity and obscurity. Pilocarpine has been presumed
rather than proved to have a special controlling action
over the phrenic nerve. It certainly stimulates the
nerves of involuntary muscles. I believe it proved
so in this case, but still more useful was the removal
to hospital, and moral control.
In the clinical manual for the study of medical cases p.465 Dr. James Fraser says it is of opinion that hiccup is common as appearing readily in certain persons after eating or drinking; it depends on a spasmodic action of the diaphragm; when of short duration it is seldom of much importance. Protracted hiccup is always a serious symptom, especially in fevers or other illnesses with much nervous prostration, in diseases of the liver and kidneys, and in cases of intestinal obstruction.
When haemorrhage occurs in typhus fever, it is generally owing to a congested state of the mucous membranes accompanied by flabellate distension of the stomach and bowels. A remarkable case of this sort occurred to M. Ireland and myself in which a convulsed man, labouring under maculated typhus, haemorrhaged during several days, more than eighteen hours out of the twenty four, as was ascertained by notes kept by his sister, who carefully watched him.

In such cases, the remedies adapted for typhus and typhus fever are most appropriate, and therefore much variety of treatment is required. Thus, when haemorrhage occurs early in the disease along with much thirst, parched tongue and tender epigastrium, the treatment ought to consist of leeches to that part, seed water in small quantities, distillate alcohol, and bland aperient injections. But when it comes on late in the disease, we must have recourse to stimulating liniments applied to the spine; blisters to the epigastrium; and if the bowels are the same time confined and distended, oil of turpentine externally, or by lavament, while the strength is supported by wine and proper remunants. Here the oil of turpentine is best given in doses of two or three drachms, combined with castor oil; but on the other hand, when diarrhoea is present, together with typhus, we must have recourse to rectal or lead, as before recommended, to various stimulants in small doses, such as turpentine, aether do., combined with opium. In fever, haemorrhage
occasionally occurs without any previous derangement of
the alimentary canal being present, and without any being
able to detect any cause of this symptom. Our treatment
under such circumstances must be empirical, and relief
will be frequently obtained by the exhibition of some
substance which has an obvious action on the nervous
system; but, as I have said, our treatment must be
empirical, in one patient we may find success attend
the exhibition of an alkalii, in another, of an acid.
The same observation applies to swallowing ice, or water
as hot as it can be drank, to the various narcotics
and stimulants, to must, camphor, &c., &c.
Extract from medical Prose & verse, mar. 14, 1855, p. 255.

The method of checking hicouagh, suggested by Dr. Drexel consists in pressing both external auditory meatus with the fingers, swallowing at the same time a few tablespoonfuls of a liquid. The hicouagh ceases at once.
In the *Aseleptic*, 1838, pp. 193, 144. Dr. Richardson writes

It has occurred to me that of late years hiccough is not so common a symptom as it formerly was in cases of acute disease. I never got, from any source, a good explanation of the cause of hiccough, nor of the reason why it should ever form part of the closing phenomena of life. I was taught that it was a spasm or convulsive action of the diaphragm, and I have seen instances in which it appeared to be the determining cause of death. Sir Thomas Makin, whom I often met in consultation, attached great importance to this symptom; and in one case, in which we were both concerned, the persistence of an intractable hiccough was the basis of his prognosis— which unfortunately proved to be too true— that the result would be fatal. In pneumonia, in peritonitis, in typhoid, it was a very frequent and unpleasant sign; whilst in some other diseases equally acute, and equally dangerous, it was rarely seen. I never saw it in acute cholera, nor in scarlet fever; nor, singularly enough, not once in the many examples of fatal collapse from obstruction in the course of the blood through the heart, to which I have so often been summoned.

The reminiscences of the phenomenon of hiccough lead me to the belief that it indicates some special disturbance of the pneumogastric, and that its presence invariably indicates serious gastric or pulmonary lesion, if it be frequently recurrent or persistent. But that which it is my object specially to refer to at this moment is the fact, if the observation be correct, that the symptom is ceasing to be so common as it once was in the cases in which it was most frequently manifested; and,
at the risk of being thought a biased observer, which, by the way, is never the fact, it seems to me that the cause of the comparative absence of the symptoms in the reduction of the vast treatment of the large quantities of alcoholic stimulants that were formerly administered in acute disease whenever the powers of life began to fail. We know how alcohol excites lucidly in persons who are supposed to be healthy; and I have not the slightest doubt that, in the worst examples of it remaining in my memory, the symptom was sustained, if not originally excited, by the rise of stimulants. In our blindness of mind, we are lead actually to administer alcohol in order to cure a symptom which it so easily produces, that its action, in this respect, has become a vulgar illustration of its potency. In other words, we produced what Dr. Clifford Carpenter has so aptly called "drug symptoms," and confounded them with the symptoms naturally incident to disease.
In the Westminster Hospital Reports, vol. VIII. 1893, Dr. Arnon writes: 

Julia J., aged 21, domestic servant, admitted to the Hospital under Dr. Hargreaves Dec. 24, 1892, suffering from brouch, which had been nearly continuous for the last eight weeks.

She was rather a delicate child until 7 years of age; had most children's complaints, but no serious illness; since then has enjoyed very good health. She has always been of an excitable nature, at times breaking out into long continued uncontrollable fits of laughter; seldom cried, never in low spirits, amusing and easily amused, and generally a cheerful, hard-working girl—menstruation commenced at 16.

She went into service about 15 months ago; for some months before commencement of present complaint she had been feeling out of sorts, though with nothing very definite the matter.

She was pale, and had some dyspnoea on exertion, and had other symptoms accompanying not very severe anemia.

Early in October she had a fright, which appears to have had rather a marked effect on her, and to which she attributes her present symptom. One evening she was sitting in a room reading, and believing herself to be alone in the house, when the door of the room was suddenly opened by a fellow servant who had been out but had returned unawares.

Three weeks afterwards the brouch commenced; during the interval between its commencement and the fright she appears to have been depressed in spirits, starting at the least noise; frequently sighing, and complaining of numbness in limbs, and difficulty in holding things owing to this sensation; seemed fidgety, and fainted on one or two occasions.
Since the latter end of October until her admission to the hospital, the hiccough during her waking hours has been continuous excepting for two or three intervals, none of which, by her own account, lasting more than three consecutive days. During sleep she was free from hiccough, but her nights were not good—narcolepsies and salvations had frequently to be resorted to. Throughout her illness, excepting during the intermissions, she has been unable to take solid food, and her diet has consisted of milk, light puddings, and beef tea, though her father says if cake, pastry or more given to her under the bandage, secrecy, she would often eat them when alone in her room. She is supposed to have lost about a stone in weight during last two months, and has been kept in bed the greater part of the time.

Since the commencement of her illness numerous remedies have been tried all unsuccessfully.

The family history is not good—her oldest brother, a congenital idiot, died in Wandsworth Asylum, Oct. 17. Two sisters and a brother of her paternal grandfather were also of unsound mind.

Whenever the hiccough ceased, sneezing commenced, about 50 times in the minute.

All available remedies seemed to fail, and patient went in alternately hiccoughing and sneezing for weeks, when she had, an acute attack of tonsillitis and the hiccough ceased.

This case appears to be another example of the old adage of Hippocrates that "Tnemoneuss phasma", as it was during an attack of acute tonsillitis that the hiccough ceased.
Hiccough is a somewhat rare complication, except as the result of diaphragmatic peritonitis. The following case is one of interest, showing how persistent and serious the condition may be even where there is no peritonitis present.

No 51, admitted 26th May, the fifth day of disease. There was the usual history of headache, loss of appetite, gastro-intestinal disturbance. The temperature varied from $100^\circ$ in the morning to $102^\circ$ at night. The patient was put on intestinal antiseptics with douching and antiseptic applications for the mouth. The bowels moved twice daily - copious pea-soupy motions. For the first ten days the progress was fairly satisfactory, save for the fact that there was some delirium at night. A very copious rash developed. By the sixteenth day of disease the mouth, notwithstanding every care, had become very foul. There was considerable pharyngitis, which rendered it difficult for the patient to take nourishment. On the eighteenth day the abdomen became much distended, and several severe attacks of hiccough occurred. For the next three days hiccough was continuous day and night, accompanied by low muttering delirium. No treatment seemed to have any influence in inhibiting the regularly recurring spasms. The abdominal distension could be controlled, but not the hiccough. On the twenty-second day there was some improvement, the hiccough ceasing
at intervals under sedatives. This improvement was progressive, the tongue began to clean slightly, nourishment was taken better, and there were longer intervals between the attacks of hiccough. A copious erythematous rash developed on the arms. There was gradual improvement in the general condition, and the patient made a good recovery. Hiccough was present during the attack for nine days. Its onset was coincident with the onset of tympanitis. It gave rise to grave anxiety, as during three days it was practically continuous it entirely prevented sleep.
I intend here to discuss the various types of disease, and to show to which type my own case belonged; and to take up the treatment of the individual cases according to the type to which they belong.

There is no better classification than that of Dr. Langford Lysons.

1. An Inflammatory type
2. An Irritative type
3. A Specific type
4. A Neurotic type
In cases of an inflammatory character, the "hicough" can be attributed to some congested state of the mucous membranes of the stomach and bowels, with increased tension and vasculosity of the coats. This is a frequent symptom in fictitious cases when the peritoneal covering of the diaphragm becomes affected and also causes severe vesical inflammatory trouble. It is found in gastritis, enteritis, hepatitis, berneé and intestinal stranguilations of the bowels.

It is occasionally a troublesome symptom during convalescence in cholera and in typhoid fever. If it occurs with any persistency it is often an indication of perforation, and the onset of general fictitious. In the malignant and prostrate stages of severe typhus hicough is frequently a symptom. In these fevers it is independent or some localized inflammation of the gastric intestinal tract. It can occur also in cases of cancer of the stomach, occasionally perhaps from over-distension of the organs, but more often from extension of the cancerous disease to the peritoneal surface of the stomach.

The above will demonstrate how hicough is liable to occur in acute inflammatory conditions.
Type Incurvate

One can under this heading put those cases of hicough which arise from causes which either removed at once cause a cessation. Thus, undue distension of the stomach by being overloaded with food or drink, or by an accumulation of wind due to faulty digestion, is a common cause of hicough. Its occurrence from this cause is far more common in children than in adults. The passage of hot, spiced or sparry foods through the pharynx in the case of some persons immediately produces hicough. The causes here however are of a temporary and remivable character, even though the spasm at this time may be very obstinate and protracted. In some cases too, although one knows that they are due to an irritation which one can remove, the hicough seems to persist in a most unwarrantable fashion. Nervous, dyspeptic, dentition pressure on nerve trunks have caused lasting attacks, also the passing of catheters and brogues.

Delenes relates a case of Mr. Robe Mowseels, where a patient suffering from a pharyngeal abscess was attacked by hicough, apparently from pressure on or implication of the pneumogastric, and where death resulted.

Several types which I have already cited will come under this heading.
(3) **Type Specific**

This class comprises those cases at which the true cause is difficult to ascertain, and which Dr. Langford Dymos so aptly terms "Quiscotic."

In these cases existing causes are difficult or impossible to find, and one must go into the constitutional ailment present.

The berucog of malacia can be put under this class, and also the berucog occurring in a gouty diathesis, and being in this diathesis a prominent symptom to the exclusion of other symptoms.

It has been noticed by Gaertner and Fowler, who regard it as a very grave symptom in gout.

In Dr. Powell's case in the Lancet November 21st, 1840 a "rheumatic fever" is brought to light.

Whenever the patient moved a rheumatic joint he berucoged recently.
In the Italian case quoted from the Florentine Hospital, pressure over the patient's left ovary or mamma produced hicough.
I hold that in my case the night vomiting— the
gears of health, well-to-do circumstances, depression,
giddiness &c., and the final depression and consti
which ended the life all pointed to a gouty tendency.
The short stout build, the temperate life as regards alcohol,
but the good living as regards food, and the affluent
circumstances which allowed of so many luxuries
make me still more hold to this opinion. The very
short neck, corpulent belly, and temperament in general
make me lean towards the opinion that gout may be
regarded as the element in the causation of what
proved a fatal malady.
Physiology and Pathology of Rhinorrhea
The nerves concerned in this trouble are the pneumogastric, the phrenic, the recurrent laryngeal, and the sympathetic.

In what extent is the phrenic concerned?

I am of opinion that the phrenic is largely concerned in the cause of hiccup, and Mr. Leloir states how he has cured hiccup by pressure on the phrenic.—I am inclined to agree with Dr. Langford Smith that the importance of the phrenic nerve is exaggerated, and I hold with his opinion, because as far as my knowledge goes no remedy applied to the region or course of the phrenic, or to the cervical spine, has been of any avail in stopping hiccup. No blisters, no cold, no heat, no galvanism had any effect in my case.—Homburg and Bright also show that direct irritation of the phrenic will not produce hiccup.

The laryngeal nerve is also in my opinion of secondary importance for the diaphragm contracts before the laryngeal muscles.

Hiccup occurs during inspiration, that is to say, the noise of hiccup does, the noise of hiccup being always present if it occurs during inspiration, but not if it takes place in the pause, or during expiration. It must be noted too, the louder the hiccup produced in the larynx the less does it distress the patient.

The pneumogastric nerve is, in my opinion, the one most directly concerned in hiccup, and the fact of the diaphragm contracting before the laryngeal muscles goes to point to a more direct communication with the gastric portion of the vagus than even the recurrent laryngeal. The pneumogastric
nerve is, not under the control of one while the phrenic is.

I hold that the act of hiccup is more an abdominal matter than a respiratory matter, as hiccup is so much more influenced by acts of swallowing or vomiting than by any act connected with breathing. Remedies also applied in direct contact to the diaphragm and stomach are sometimes also found to be curative.

Dr. Langford quote is of opinion, that the influence of the act of swallowing, which is undoubted in allaying it is due to the employment of the "pneumogastric" for the purpose as much as possible in the mechanism of which it is largely engaged and thus detaching from its really gastric function, rendering it as it were less sensitive to and less capable of conveying with precision the mere indigestion arising within the stomach. That the solar plexus is concerned in the act of hiccup, and thus the sympathetic communications of the semi-lunar ganglia are worked on my mind, for in my case after an act of retching the hiccup no longer always ceased - my case is identical in this respect with that of Dr. Hobbs.

The diagram of the course of the sympathetic nerves and the solar plexus gives to prove how an overloaded stomach will cause pressure and irritation, and how a stomach emptied of its contents will remove that pressure and irritation. The subject of tracing the direct lines by which the influence is conveyed to the diaphragm to cause the strain, is fraught with difficulty, and I only wish that it could be more clearly understood.

I would draw attention to the course of the left pneumogastric nerve on the anterior surface of the stomach in the diagram to illustrate the course of the pneumogastric nerves. The other diagrams are to illustrate the origin and course of the phrenic, and in the diagram of the thoracic section of the thoracopone can clearly see the position of the phrenic, the pneumogastric, and the sympathetic.
In the Edinburgh Hospital Reports, 1873, in a paper
on extra asystole or extrasystole, Dr. John Wylie makes
the following remarks, and this paper of his in my opinion
greatly assists our understanding as to the function of the larynx.
Dr. Wylie says,

There are four important functions in the performance of which
the larynx takes a part—phonation, deglutition, coughing and
inspiration. Dr. Wylie shows how in almost all cases of
laryngeal plaster, the obstruction is greater and the noise louder
during inspiration than during expiration. The explanation of
this is to be found in the anatomical formation of the parts within
the larynx. In the adult larynx if we bind the anulareoids
 together and thereby bring the vocal cords into position for vocalization
we shall find on examining the cavity of the larynx below the level
of the vocal cords that that cavity or air space is wedge shaped
the edge of the wedge of air pointing upwards between the vocal cords.
This shape explains how in laryngeal obstruction expiration is easy
as compared with inspiration. The latter is so difficult because of a
very different formation of the air space above the true vocal cords.
Here on the upper surface of the true cords when in that position there
is a broad flattened plane which beyond the upper edges of the cords is
actually hollowed out to some extent. When the cords are together the
column of air pressing on this broad surface and its external hollows
will find it is effectively obstructed almost as if by a valve with
flaps facing upwards.

This bears out what I have said before that the noise of breathing
occurs during inspiration, and no noise occurs if the inspiration
takes place in the pause or during expiration.
To illustrate course of Pneumo-gastric Nerve
(after Gray)
Transverse Section of Thorax to illustrate position of Phrenic Nerve and Pneumogastric Nerve and Sympathetic

(after Gray)
To illustrate origin of Phrenic (after Gray)

Cervical Plexus
To illustrate origin of Nerves of the Eighth Pair
Ganglia and Communications

(after Gray)
Brachial Plexus

To illustrate communication with Phrenic Nerve

(after Gray)
To illustrate origin and course of Phrenic Nerve
(after Gray)
To illustrate the Sympathetic Nerve and the Solar Plexus

(after Gray)
Brachial Plexus

To illustrate communication with Phrenic Nerve

(after Gray)