Lavage of the Stomach,
as a method of treatment,
in
Disordered Digestion.

J. C. Rossie, M.B. Edin. 1791.

New Abbey
by Dumfries.
The cases referred to were private patients in a general practice in Cumberland, where I was assistant 1891-93. In October 1891, to one of my patients, who had been under treatment for indigestion, during a lengthened period and with little benefit, I suggested the washing out of his stomach with the stomach tube. After some little hesitation he agreed to its being done, and the consent of my principal having been obtained, I began treatment.

In four of the cases quoted, the treatment was carried out at their own homes, two of them being confined to bed; in the others, treatment was carried out in the consulting room. The apparatus used consisted of a soft red rubber stomach tube of medium thickness. It had a blunt end, and an expeller on opposite sides, three-quarters of an
inch, and two and a quarter inches respectively from the blunt end. It was connected by a piece of glass tubing with another rubber tube about forty inches long, and having a subcavitate funnel of three ounce capacity attached to it. The liquid used was tepid water which had been previously boiled, and cooled to the required temperature — about that of new milk. Sometimes the water was used alone, at other times it had dissolved in it, Bicarbonate of Soda, or Permanganate of Potash (added till the liquid was of a pale pink colour). The amount of water used for each individual wash, varied with the capacity of the stomach, from two to three pints and over.

The method: The patient was placed in the sitting posture, with the head thrown
Slightly forward. The apparatus, filled with the liquid, was held by its ends. The blunt end moistened with the warm water, was forced well back into the pharynx and the patient asked to swallow. As a rule it went quite easily into the oesophagus, and was gently and continuously pushed forward until only a few inches intervened between the lips and the glass tube. The funnel was then raised above the patient's head, and a steady stream of liquid poured from a jug until the stomach was full. Before the last of the liquid left the funnel, the tube just below it, was pinched with the fingers, and the funnel lowered. On releasing the tube, the stomach contents came through it, into a dish placed below. Often the flow was checked by a particle of undigested food blocking up...
the syringe. This was easily re-
moved by raising the funnel,
and filling the tube with water.
This process of filling and
emptying the stomach was re-
peted until the return wash
came back clear from fragments
of food and films of mucus.
When soda bicarbonate or Pot-ass.
permanganate had been in solution,
water alone was used for the
final wash-out. The residual
water sometimes left in the
stomach after epiration action
ceased, was removed by detach-
ing the outer piece of tubing, at
the glass connection, and with
the patient standing in a stoop-
ing posture, pressure being made
on the diaphragm. The stomach
tube was then withdrawn, and
the patient rested in the re-
cumbent position for some
minutes—ten to twenty. Those
patients who underwent treatment
in the consulting room sipped some milk and warm water before going outside.

Time and frequency of the washing out was done in the evening, not to seven hours after the mid-day dinner. At the commencement of treatment it was done daily, but as the patient's condition improved, at longer intervals.

The cases quoted may be classified somewhat as follows.

[1] Impaired Digestive Function, but no organic lesion of the stomach.

A. Irritable Condition of Stomach shown by

(a) Pain and Discomfort after food Case I.

(b) (do) + acid vomiting at night IV.

(c) (do) + nervous irritability V.

(d) (do) "Hypochondriasis" VI.

(e) Fatulence + Rem. Dig. nervous Symptoms VII.

B. Some Insufficiency of Stomach, I
- Insufficiency added to this - II
- and associated with Chronic Ulcer + Catarrh.
- Dilatation of Stomach.
  (a) non obstructive
  (b) Obstructive (Cancerous)

Case I.

March 3, 1892: began treatment with tube.
Complaint: Pain and discomfort in the epigastrium, coming on after a meal, especially after the midday dinner, and lasting for a varying length of time.
Duration: a few weeks.

Family History: Good.
Food and Drink: His habits were good. Total abstainer from alcohol in any form. 7 a.m.: Porridge and milk + tea, bacon and bread. Dinner 12 noon: Soup, meat, vegetables, pudding. Supper 6 p.m.: Tea, bread, butternut. 8 p.m.
Surroundings: He had a comfortable home, and was a "working-farmer". He had at 9 p.m. and up at 5 a.m.

Origin of Present Illness: It came on gradually. The spring being a time of extra pressure in farm work, his meals were often eaten hurriedly, and there was little intermission of work from morning till night. His condition not getting better he came to consult me.

Present State: He was a well-developed, strong, muscular man, with no obvious morbid appearances, nor evidence of previous injury or disease.

Alimentary System: Teeth good: Tongue coated with a thick white film; Appetite good; Heartburn troublesome occasionally; Sensations of pain and discomfort after food referred to the spleen and abdominal bowels constipated.
Abdominal examination produced negative results.

Provisional Diagnosis: Irritable Stomach

Treatment: He was put on a liquid diet and on the first occasion the treatment was carried out in the consulting room (in this case only, about 6 p.m.). The tube was passed without any trouble. A large quantity of broken up food was brought away. It had a strongly acid reaction to blue litmus paper. Sodium Bicarbonate was used in the next two washes and the fourth wash came back clear. The process was repeated every night from March 3rd to 19th and on the last four occasions the wash came back almost clear at the first wash out. During treatment he was on his ordinary diet, except that he had supper consisting of bread and boiled...
milk at 4.30 p.m. This was the only patient in the series who was allowed any supper after the evening wash.

The pain and discomfort were relieved entirely, by the 29th March, when further treatment ceased. The constipation was relieved by the first day of treatment, and he had a regular daily motion thereafter. No medicated treatment was employed.

Case II.

March 13, 1892, began treatment with tube.
Complaint: Pain in the epigastrium.
General discomfort after food. Lasting for some hours, and sometimes relieved by forced vomiting.
Duration: A few weeks.
Family History: Good.
Food and Drink: No habits were good.
Total: Abstainer.
from alcohol in any form: B
day 8 a.m. Eqq. bread, butter, tea. Dinner p.m. meal: potatoes, pudding, s.p.m. tea, bread, butter, jam, bed time a glass of milk.
Surroundings: He lived in good away room. At work, his hours in the shop were 8:30 a.m. to 4:30 p.m. with an hour allowed for dinner and half an hour for tea. He was out travelling in the country district three days a week, and was on these days somewhat irregular with his meals.
Origin of Present Illness: He had been more or less troubled with his stomach for some time past, but he had generally got somewhat better without consulting a medical man. For three weeks, he had been very busy in the shop, and his symptoms were getting worse. He consulted me first at the end of February, and I fie.
Scribbled a Rhubarb + Soda mixture after food, but with little benefit. He also had a fortnight's treatment with Lire. Bismuth + Co. (Ferri) + a minute piece of Aloes + Iron; but he did not feel any better, and consulted me again on March 13th.

Present State: He was a fearful well developed young man, well nourished, and with no obvious mottled appearances. He was a student, until &c. business. Rooking man.

Gastrointestinal System: Teeth Good. Tongue, slightly coated with a white fur on the dorsum. Appetite Good. He had sensations of pain and discomfort after food, especially after drinking. When he forced vomiting, the matter brought up was hot and burning in the mouth. Bowels were constipated.

Abdominal Examination gave negative results.
Provisional Diagnosis: Irritable Stomach.

Treatment: After medicinal means had been tried as above mentioned, washing out of the stomach was begun on March 12th. It was done at 8.30 p.m. but owing to his business could not be done every night. The treatment was carried out in the consulting room. At the first washout on March 13th a large quantity of undigested food came away. The reaction was acid to blue litmus paper. There was probably acetate acid fermentation, judging from the smell. So dil. Bicarb. was used in the next four washings and the fifth came back clear. Complete immediate relief was experienced. The washing was done March 15, 16, 18, 20, 21, 26 and April 2, 16. His condition improved as treatment went on. The return wash was nearly clear on April 2nd and clear on April 16th. Ordinary diet was allowed all throughout.
Case III.


March 2, 1893. Began treatment with tube.

Complaint: was the same as in Case II.

Surroundings, habits &c. on same lines as in Case II.

Treatment: had no medicine but was treated with the tube from the very first. He had heard of its use in other cases, and requested its application to his stomach. The washing was done at 8 p.m. for two weeks, every night, and with great relief to this condition. For the first week his stomach always contained a quantity of undigested food, but the amount always diminished after successive nights' treatment, till March 18th, when it was quite clear. Ordinary diet was allowed, and it was the same kind as in Case II. He was treated in the consulting room, and had milk and warm water after the operation.
Case IV

January 5, 1892. Began treatment with tube.
Complaint: Some discomfort after good.
Referred to the epigastrium.
Vomiting of strongly acid liquid
during the night, two hours or so after bedtime.
Duration: a few weeks.
Family history: Good.
Food and drink: Total abstainer
from alcohol in any form. Breakfast 4 a.m. Porridge, milk, with tea, bread, butter.
Dinner 12.30. Soup, potatoes, bread occasionally butternut meat. Supper 6 p.m. Sometimes porridge and milk, at other times, tea, bread, butter.
Surroundings: He lived in a fairly comfortable cottage
Among the fields. His work was all
in the open air. Often he had
long weeks, and his meals were
occasionally irregular in con:
: Sequences.
Previous Illness: He had an attack of the same kind a year or two previously. He had been in hospital, and washing out his stomach had put him right.

Origin of Present Illness: It came on gradually. The first symptoms were some discomfort after food, and then after a week or so the acid vomiting at night. He had tried alkalis taken at bedtime. Lodii Resin, qn xx, but with no good effect.

Present State: He was a healthy looking man. Fairly well developed, and well nourished. He was of the neurotic temperament.

Alimentary System: Teeth, perfect.

Tongue very slightiy coated on the dorsum. Appetite fairiy good. Sensation of discomfort in the perigastrium after food; lasting for some hours, sometimes. He was always worse after he went to bed at night. He usually slept...
well for the first two hours and then on one with a pain in his stomach region, which was relieved when he vomited a quantity of nearly clear acid liquid. Abdominal examination gave negative results. There was probably slight dilatation of the stomach judging from the amount of liquid it could contain. Other symptoms were normal though he complained of dysknoea and palpitation before vomiting during the night. This was relieved by the emptying of the stomach.

Provisional Diagnosis: Irritable Stomach with Hyperacidity.

Treatment: He took lodgings near the consulting room and came to have his stomach washed out every evening, for seven consecutive evenings. There was no good in the return work but it was intensely acid in
The action towards the culminus, probably due to strychnine and acid, the stomach was washed out three times every evening, first with water alone, then with soda bicarb. in solution, and then with water. He was fed on a diet having more butternut 'meal.' He had a chop for dinner every day, and some bacon at breakfast time. Instead of porridge, the vomiting at bedtime ceased the fourth day of treatment, and on the seventh day he felt so much better that he returned to his home. He took a stomach tube home with him and continued the washing for another three weeks. I saw him two months afterwards, and he had no return of his symptoms. He had also slightly changed his diet, only taking porridge to the morning meal.
Case V.


Duration: About six months.

Family history: Good. Father and mother both alive, old and people. His wife died of Phthisis which ran a very quick course in her case. It was acquired while nursing one of her own relatives, who died from the same cause.

Food and drink: He was a total abstainer from alcohol in any form. 6 a.m. Cup of coffee or warm milk before going to work.

Breakfast. 8 a.m. Bacon. Egg. Tea. Bread. Butter - barley cocoa. Dinner. 1 p.m. Soup, meat, potatoes - eatery soup and milk puddings only. Tea. 5 p.m. Tea - cocoa eatery - bread, butter sometimes an egg or white fish.
at bed time a glass of milk. Surroundings, he had a comfort able home, and all work was "Gaffer" in a large airy workshop. His hours were 6 a.m. to 5 p.m. an hour allowed for breakfast and one for dinner.

Origin of Present Illness: The death of his wife about a year previously, had been a great quiet to him, and the consequent change in his household arrange ments, probably the want of con genial society at times, had something to do with bringing on his condition. His stomach had troubled him for some time, he said to me, when he consulted me for the first time, August 9th. I prescribed Redoline Bismuth, Soda, and Syrup. This relieved his dyspeptic symptoms for a very short period only. He then had a course of Potassium Bromide, which gave him some relief,- temporary-
I saw him four times in September and many times in October. He was getting worse and losing flesh. I suggested to him the washing out of his stomach. After some hesitation he consented. He was the quietest patient I tried the treatment on.

Present State: He was a very well developed man. He said he was losing weight. His muscles were rather soft. He had an anxious expression of face. He was of the nervous temperament and was inclined to take a very melancholy view of his own condition.

Digestive System: Several of his teeth were wanting. Tongue thinly coated, all but the edge, with a yellowish fur. Appetite capricious - sometimes he took a good meal and enjoyed it, but this had been the exception lately; more often he fell little
inclination for food. He often had a sensation of emptiness in the epigastrium, thus relieved by eating something. After food he had great discomfort lasting for hours, sometimes relieved by vomiting. The vomited matter was good in various stages of digestion, some as it had been swallowed and there was evidence of acetic acid fermentation. The reaction was acid to blue litmus. Bowels were constipated.

Abdominal examination: Palpation revealed some diffuse tenderness in the epigastrium, and left hypochondrium. No signs of dilatation of the stomach.

Circulatory system: Palpitation was troublesome at times after food, and when he lay down in bed. Pulse was rather quick up to 85 per minute. It was regular, soft, and the artery well filled.

Respiratory system: results negat.
Urinary System: urine neutral and loaded with phosphate.

Nervous System: headache often troublesome in the morning. He used to describe himself "nervous as a cat".

Provisional Diagnosis: Irritable Stomach.

Treatment: Washing out. The stomach was begun October 21st at 8 p.m. The tube was swallowed after one or two attempts, and water poured into the stomach. On reversing the siphon the contents came away and contained much broken up food and some mucus. The reaction was acid to blue litmus. The process was repeated five times before the liquid came back clear. Sodium bicarbonate was used in Muriat.

That night he slept well and had no headache, or bad taste in his mouth next morning. He took bacon for breakfast and chose for dinner, and had no
discomfort till three hours after his dinner. He had tea and bread and butter at 3 p.m. and his stomach was washed at 8:30 p.m. Three washings sufficed on this the second evening. He was encouraged to eat more animal food - chops or grilled steak to his dinner, and the washing-out was done on ten consecutive evenings in the consulting room. His condition certainly improved very much in these ten days, and in the evenings there was much less food found in his stomach, though he was eating more. He got a set of new teeth in November, and all that month used the tube at home every night. His condition still improved, and he put on flesh. I washed out his stomach on Nov. 30th and got a nearly clear return - wash at first. He had gained 3 lbs. in weight by this time. His appetite improved and his tongue much cleaner.
He continued in good health, and said he felt a different man till June 1892 when he got a chill and was confined to the house for a few days. His stomach at this time showed some signs of irritability but a week's treatment with the tube put him all right again. In 1894 he married, and is now, I am told, as healthy as any man need be.

Case VI.


Complaint: Great thirst; 'Food did him no good', he said. He said he had diabetes and that all his food turned into water - urine.

March 12, 92. Began treatment with tube.

Duration of illness: Three months.

Family history: Good.

Food and drink: Total abstainer from alcoholic liquids. When he came to consult me, he was practising really abstaining himself. Under the
impression that good diet had him no good. He drank enormous quarts of water. Ordinarily he had three meals a day; 2 p.m., 7:30 p.m., coffee at 12 mid-night, and some milk when he came off duty at 6 a.m. Surroundings: He had fairly good lodgings. He was on night duty a good deal, and he said he had never been well since he joined the Force, and was put on night duty.

Origin of Present Illness: It began three months before I saw him. He himself thought that the change in his habits—he had previously been a gardener—had a good deal to do with his trouble. Dyspeptic symptoms had troubled him for at least two months. He had taken patent medicines of all kinds, and was a walking dictionary on the symptoms of diabetes. What food he had taken lately was, tinmed beef brown bread, and cocoa. His various
medicines having had no beneficial effect, he came to me.

Present State: He was a well developed young man, but very thin and emaciated. He had an anxious expression of face. Anaemia was well marked, and he was of the neurotic temperament.

Alimentary System: Teeth good. Gums

Anaemia: Tongue pale and flabby. Sensation of hunger, but he would not eat. He had great thirst. After food he had some discomfort in the epigastrium. Bowels were constipated.

Abdominal Examination: The abdominal walls were thin. Slight tenderness in the epigastrium on palpation.

Urinary System: He passed large quantities of urine, neutral or faintly acid in reaction, and of low specific gravity.

 Provisional Diagnosis: Irritable Stomach - Hypochondriasis.
Treatment: He was quite willing to have his stomach washed out. It was done at 7.30 p.m., nine hours and a half after his breakfast. There was a very small quantity of broken food in his stomach, mostly fibres of corned beef. The reaction of the stomach contents was neutral, or very faintly acid to blue litmus. There was slight dilatation of the stomach, judging from the amount of liquid it could contain. The washing was done for three weeks, and he was encouraged to take a more liberal diet. I thought the treatment might at least have some moral effect on him. He certainly did improve somewhat. He took a mixture containing citrate of iron and ammonia, three times a day. After three weeks treatment he stopped calling, and I did not see him for two months. He then said he had been to Edinburgh Infirmary, and a big blister, put on his belly, had cured him.
Case VII

P.S. age 52. unmarried Publisher

February 22 1892. began treatment with tube.


Duration: about two years.

Family History: good.

Food and Drink: He was very methodical and regular in his habits. Breakfast 8.30 a.m. Fish, bacon, c.q. tea, bread, butter. Dinner 1 p.m. Soup, joint, dessert. Often some sparkling wine, Hock or Champagne. Tea 5 p.m. Tea bread, butter. Supper 8 p.m. Bread and milk or porridge. Before going to bed had a small glass of Old Sester whisky well diluted with water. Cus with a cigar and a game of billiards.

Surroundings: He lived in a large modern villa. He took walking, driving, and cycling exercise and also did some gardening. He was at work in his office for three
hours before dinner, and for an hour or so in the evening. The office was a roomy and airy one, i.e., a large stationery shop.

Origin of Present Illness: It came on gradually about two years before I saw him. For some time the 'tinnitus' had been the most annoying symptom. He had consulted specialists in London and on the continent. Moreover, he had read all the literature he could get at, on 'ear disease', and from a remark one medical man made to him, he thought he had 'Meniere's Disease'. He had taken Pernas, Bromid, at intervals, mineral waters of various kinds, and had travelled 'in search of health', a good deal - Rienza, Bournemouth, Harrow, etc., Eilebron.

In October 1891 he consulted me for 'tinnitus'. I examined his ears but found nothing to account for it. In January 1892 he consulted me again, for symptoms as described above and an 'complaint'...
I then wondered how far faulty digestion had to do with this condition. Examination of the ear was negative. I gave him Bromide of Strontium gr. xx. t. i. d. after food. He took this medicine all through January and got some relief, but in February the symptoms all returned.

Present State: He was a well-developed man of medium height. He had no obvious morbid appearances. His general appearance was good. He was well-nourished. He looked and felt depressed in spirits. Elementary System: Teeth good.

Tongue slightly coated on the dorsum. Appetite good. He had a sensation of slight dyspepsia after food. This only occasionally and after dinner. Dejection was troublesome at such times. No pain no nausea. The vertigo was worse about an hour after dinner. His bowels were regular — daily motion
Abdominal examination: negative results.
Urinary system: Urine was often
examined and was
neutral or faintly acid in reaction.
It contained a few phosphates
and a minute quantity of mucus.
Other systems: normal.
Provisional diagnosis: Faculty digestion
with an element
of hypochondriasis.

Treatment: The washing was done
at home, in the bath,
room, at 8 p.m. every evening from
Feb 28 to April 14, 1882. On the
first evening, the stomach was
filled and emptied seven times
before the liquid came back, clear
from particles of food. The stomach
contents consisted of particles of
unaltered beef fibre, he had roast
beef for dinner, large numbers
of cafe granules, bits of cabbage,
and some mucus. And the re-
action was acid but not very
markedly so. The times on which
I chided him, wherever the evening wash out showed a preponderance of some food stuff not digested, he avoided that particular food so far as possible. Roast mutton if he had it for dinner, was always cut out of the stomach at 8 p.m. Chicken again, was always present in large quantities. Whilst fish did well with him, champagne always delayed digestion, so it was cut off, and a small quantity of well-diluted whisky substituted. He felt much comfort from the treatment, and on April 14th, his stomach contained very little food at wasting time. Dr. Muirhead, Edinburgh, was then consulted, as to how long the treatment should be continued. He advised examining of the stomach contents in the morning. A small quantity of a nearly clean fluid was ex- pressed by Wald's method, and was found to contain a trace of acetie
Acid. The patient then saw Dr. Lunnhead, and Dr. Lil. Bride, both of whom examined him. There was very slight enlargement of the Eustachian canal. Dr. Lunnhead regarded nausea, digestion to be the cause of his symptoms, and seeing that he had improved so much under treatment, advised washing, but at longer intervals. He cut off aleator in all forms, and took sedatives. The washing was done five times in May, and three times in July. And after a few weeks at the seaside in August, he returned home with his symptoms vanished, nor had he any relapse so long as he was in the district - up till the following summer.

Case VIII.

Mrs. S., age 19. Domestic servant.
March 10, 1876. Began treatment with tube.
Complaint: Great discomfort and pain in the epigastrium, went...
after taking food: Breathlessness.
Duration: a few weeks.
Family History: good.
Food and Drink: Breakfast 6 a.m. Cocoa with milk, bread, butter, sometimes an egg. Dinner 1 p.m.
Soup, meat, potatoes. Tea 5 p.m. Tea, bread, butter, jam. Supper 8:30 p.m.
Cocoa or milk, bread.
Surroundings: She had a good home, and her mistress was very considerate, and she was not overworked.
Previous Illness: Eighteen months before I saw her, she had a similar attack, and, after a long
course of medical treatment, she had recovered.
Origin of Present Illness: She first noticed the breathlessness. She took Brand's Pills for a few
weeks, but did not improve, and her dyspeptic symptoms becoming
exacerbated, she consulted me.
on March 10, 82.
Chalice, or in the vessels of the mass.

Chalice, or in the vessels of the mass.

Chalice, or in the vessels of the mass.

Chalice, or in the vessels of the mass.

Chalice, or in the vessels of the mass.
Respiratory System: Breathlessness on exertion.

Reproductive System: Amenorrhoea.

Provisional Diagnosis: Dyspepsia and chlorosis.

Treatment: Washing out the stomach was done every evening from March 10th to 21st, and on April 2nd, 11th, and 16th. She also took a pills containing ferri phosph. t.i.d., after food. On the first evening of treatment, the stomach contained a large quantity of undigested food, and there was some fermentative change going on it. The reaction was acid to the litmus. No carcinæ were found. On microscopic examination, iodine, rose bengal, was used in the wash, and potassium, on alternate evenings, there was great relief experienced after the operation. The patient very quickly improved, and on March 26th, the liquid came back from the stomach, clean, all the first week out. She was on ordinary diet all the
time. The iron was still administered, and the tube used on three occasions in April, by which time she was feeling quite well, and further treatment ceased.

Case IX.

E.H. T., age 38. Farmer’s daughter.
March 17, 1892. Began treatment with tube.
Duration: About six months.
Family History: Good.
Food and Drink: She was a total abstainer from alcoholic liquors, but had been in the habit of taking “Laudanum” for some time back, to relieve her pain. During the six months she was under treatment, before the stomach tube was used, it was exceedingly difficult to check her. I found out from her relatives, that for years she had been in the habit of eating
large quantities of pastry, though it always made her ill. She also drank tea too often.

Surroundings: She had a good home. When I saw her first, she was confined to bed. When she had been able to work, she assisted in the dairy.

Previous Illness: There was a history of gastric ulcer which had confined her to bed (seven or eight years previously) for some months. From that time to the present, there was an almost constant history of dyspepsia.

Origin of Present Illness: The dyspepsia always got worse, and she took to bed in March 1891. I treated her as for chronic ulcer. A mixture containing Bismuth, Epsom salt, morphine, hydrochloric acid. For a long time she took it relieved her pain. I visited her, so far as I could, on liquid nourishment, but I had no guarantee that she followed out my instructions. I saw her frequently during November.
and December 1891, and she was still confined to bed. Her constipation was relieved by enemata of soap and water. In January 23rd, 1892, she had a sudden and violent attack of vomiting, and put up a large quantity of blood. When I saw her, two hours afterwards, she was in a very weak state. I gave her a hypodermic of morphine, and saw her again next morning. She would not allow feeding by the stomach. So she was put on milk and lime-water, and ice. Along with the bromide and morphia mixture. There was no further bleeding at that time. Though occasionally during February there was a small quantity of coherent blood, in the matter she vomited. Two other medical men saw her along with me in that month, one of them suggested the possibility of some cancerous condition of the stomach, but there was nothing definite to prove this.
She was still confined to bed, and had great pain in the epigastrium if she stopped her morphine. This continued to be her condition till March 14th, 1892, when I began to wash out her stomach.

Present State: She was confined to bed, was very emaciated, and the expression of her face denoted great suffering.

Alimentary System: Teeth fairly good.


Vomited matter was chiefly food last taken, mucous, and sometimes "coffee grounds." Bowels constipated.

Abdominal Examination: Abdominal walls were thin.

On palpation, there was tenderness
in the epigastrium. On percussion, one very tender spot was found in the epigastrium, and this spot was duller than the rest of that region. The stomach was somewhat dilated judging from the amount of fluid it could contain.

Haemopoietic System: There was clin.
- omitted number

Of Red Blood Corpuscles on microscopic examination.

Circulatory System: Palpitation was troublesome at times. There were functional murmurs over the vessels in the neck. The pulse was quick, but regular and soft.

Respiratory System: Negative results.

Urinary System: The urine showed no great variation from normal, occasionally loaded with urates. Once a trace of albumen was discovered.

Reproductive System: Illustration

Cirrular, /varicose
Nervous System: Headache troublesome at times: occasional facial neuralgia.

Locomotor System: Marked wasting of muscles.

Provisional Diagnosis: Chronic ulcers of the stomach associated with some catarhal changes in the organ, and slight dilatation.

Treatment: On March 17th I began to wash out the stomach. I was with some trepidation I passed the tube. It was easily swallowed. Some warm water was poured into the stomach, and on reversing the flow the contents of the stomach came away. There was a quantity of mucus of a brownish shade, some blood of milk, and a small quantity of coffee-ground material. There was some frothiness of the stomach contents. Potass. Permon was used in the next wash. The stomach was then washed with water alone, and the lig and returned
fairly clear. Great relief was experienced by the patient. The washing was done daily up to the 24th. She was visited on sleek, lime water, soup. Bengin's food. Taken in small quantities, and at short intervals. She still took morphia but not so often. There was always some nausea in the return wash from the stomach, occasionally clotted milk, and was often "coffee grounds." The washing was continued during April. And in the end of that month her chill was improved. Finely cut toasted bacon, did well with her. She had milk puddings and sometimes a small slice of roast mutton. The tube was used occasionally at night, and in June was abandoned altogether. She was now able to be up for some hours every day. And I ceased visiting her.

I did not see her again till November. She still had pain, but there was no vomiting. She was still very in 'aneised' in her chill, and still
look bandannum "occasionally." I did not again see her, but am told that at the present time she is fairly well, and going about her usual avocations, nor have she been under treatment since 1892.

Case X.

Mrs B. age 31. Domestic servant.
February 29th, 1892. began treatment with tube.

Complaint: Loss of appetite; loss of flesh; great discomfort in the abdomen; breathlessness; vomiting.

Duration: Several months.

Family history: Good.

Food and drink: Total abstainer from alcoholic liquors.

She had tried various diets before I saw her. At present she was eating whatever she had a fancy for, and was no worse in health than when she had been following any of the diets listed that had been prescribed for her. She drank tea too often.

Surroundings: She was housekeeper...
in a mansion house in the country, and was not overworked.

Previous illness: She had often had 'turns' with her stomach, but had generally got quickly over it, and without consulting a medical man.

Origin of present illness: It came on gradually, and was always getting worse. She had consulted many medical men, and taken various medicines, but with no benefit. She had heard of my using the stomach tube, and wanted it used on her.

Present state: She was an impecuniated female, about medium height, very pale, and evidently in bad health. The expression of her face was care worn.

Alimentary system: Several teeth wanting - this subsequently remedied - 2 worms, pale, syphonic; tongue, pale, fleshy; Glicidum allant Papillae seemed raised, and very much enlarged. Foul
breath. Appetite poor. Sensation of emptiness felt during fasting. After food, sensation of discomfort in the upper part of the abdomen. This sometimes relieved by vomiting. Vomited a matter consisting of enormous quantities of broken up food, with a foul smell. On introducing the tube for the first time a quantity, perhaps three to four pints, came away. It had the odour of 'old beer barrels'. Its reaction was faintly acid to blue litmus paper. Some barley was seen that had been eaten four days ago. On microscopic examination corinacae were found. The bowels were usually constipated, but occasionally there was diarrhea. Abdominal examination: The walls were thin and flaccid.

The stomach was dilated, extending into the umbilical region, to the level of the umbilicus. On palpation a 'speaking' sound was obtained. Haematopoeitic system: There was a
Deficiency in the number of red blood corpuscles on microscopical examination.

Circulatory System: Palpitation was troublesome at times.

There was a well-marked 'bruit' over the vessels of the neck.

Respiratory System: Breathing was clear.

Urinary System: Urine was neutral in reaction and contained some phosphates.

Reproductive System: Amenorrhoea.

Provisional Diagnosis: Dilatation of the stomach, non-obstructive, and irritability of the organ, superadded. Anaemia.

Treatment: Washing out of the stomach was begun on 3/6/29, 1892, and was continued daily till April 184. Potass. Perman. was used in solution. It took seven washings to clear the stomach on the first occasion. Its condition at that time has been already described.
There was great immediate relief after the operation. The stomach was able to contain about five pints of water. The patient slept well that night. During treatment she was fed as follows. 8 a.m. Toasted bacon and bread, a cup of weak tea.

Dinner at mid-day. Chop or its equivalent in roast beef or mutton, one potato, and some pudding. Tea at 3. 6 p.m. Cup of weak tea, toast. 7.30 wash-out. And thereafter some warm milk.

She took a pill containing ferri phosph after each meal. The washing was done at home by a friend, but I did it myself.

March 3, 8, 15, 24th, April 5, 8, 16th, and on each successive visit found the condition improving. In April the water came back from the stomach nearly clear at the first. The stomach was not so dilated, and the vomiting had ceased. The constipation was relieved from the beginning of treatment.

She called on me in August, and I scarcely knew her to be the same woman.
Case XI

Mrs. F., age 22. Domestic servant.

Sep. 3, 1892. Began treatment with tincture.

Complaint: Pain after food referred to the epigastrium, pain in the chest, vomiting, breathlessness, aneurism.

Duration: Seven months.

Family History: Her mother dead of Phthisis Pulmonalis, otherwise history good.

Food and Drink: Her habits were not good in this respect, when I saw her she was eating at home. Her meals were irregular, and she drank tea too often, and I question whether she ate sufficiently nourishing food.

Surroundings: She had lived at home for some months.

She lived in a narrow back street, and was ill-ventilated and very unattractive in appearance, both inside and out. The living room was also a shop.
Previoius Illness: Two years ago there was a history of a somewhat similar condition, and of haematemesis.

Origin of Present Illness: It began six months before, when she was at service. She thought the work too hard and came home. Her condition becoming worse she consulted me in Feb. 92. I gave her Bismuth Co. (tarry) and a pile of Aloes and Iron, and told her how to diet herself. She continued this treatment at intervals till August. She was sometimes better, sometimes not. As soon as she felt any improvement, she committed some dietary indiscretion that made her bad again. I urged her to go to hospital but she would not do. She lay in bed all August, and took liquid diet, and improved. So far as suffering pain went. In Sept.—in October I started washing out her stomach. Her state was as follow:
Present State: She was an undernourished unhealthy-looking female. Her face had a look of suffering, and was of a dirty muddy colour. Alimentary System: Teeth bad, gums wanting, lips and gums anaemic. Tongue looked irritably, and had some little blisters on it. Breath foul. Appetite poor. And capricious. Sensation of pain in the epigastrium after food. Vomiting had ceased under her mother's care in bed. Bowels were constipated. Abdominal examination, on palpation there was tenderness in the epigastrium. The stomach was dilated, nearly to the edge of the umbilicus. Haemopoietic System: Great dilatation in the number of red blood corpuscles. on microscopic examination. Circulatory System: Bruit over the vessels of the neck.
Respiratory System: Breathlessness on exertion. Fullness and oppression after food.

Urinary System: Urine neutral or faintly acid in reaction, and containing phosphates.

Reproductive System: Amenorrhoea.

Provisional Diagnosis: Dilatation of the Stomach.

Irregularity superadded, and associated with general anaemia.

Treatment: The tube was swallowed easily, and washing was done from Sept. 20th to 30th every evening. She was put on a more liberal diet. Bacon in the morning and a chop for dinner. This was followed out all through December. She could afford it, for her relations were not in poverty, though they were careless in their habits as to food and drink. The vomiting and pain ceased, and in the first of October she left the district. She also took a ride of forty miles.
Case XII.

Mrs. B. Age 53.

November 2.92. Began treatment with tube.

She was a patient of my principles, and had been under his care for about a year. She was suffering from Cancer of the Pyloric region of the stomach, and there was considerable dilatation of the organ. Present state: She was confined to bed, and was very emaciated. The cachexia was well marked.

Alimentary System: There was a well-marked tumour of the Pylorus, and the stomach was dilated. 'Spasming' was easily obtained. Vomiting caused her great annoyance. The vomiting matter was gauntly clear in reaction and contained mucus, 'coffee grounds' at times, and clotted milk.

Treatment: The tube was passed without trouble, and about three pints of warm water
bound into the stomach, and the stomach being reversed, the contents came away. The process was repeated three times on this occasion, and Potas. Pormung was used in solution for the second wash. The washing was done from Nov. 2 to 22, and the patient experienced great relief from it. Feeding by the rectum was done regularly. She also took some strong Louis, and Perandis aqueous by the mouth. On November 22nd, owing to the patient's decreasing strength, it was thought advisable to stop the stomach washing. Though she herself wished it continued, she died in the end of December.

At the present time I am washing out the stomach of a female, who is suffering from neurasthenia. The most prominent symptom is vomiting, which lasts for an hour every evening. So far, no benefit has been derived from the treatment.
Remarks on the Cases:

Cases I. II. III. In the case of these men, business pressure at a particular season of the year brought on their condition. There was increased mental exertion, and their meals, especially the mid-day one, were eaten hurriedly, and hard work begun too soon afterwards. As a consequence an irritable condition of the stomach was set up. Ewald, "Diseases of the Stomach" p. 388 quotes the mental exertion of business men as a predisposing factor in this connection. Stiller noted an exacerbation of this kind among his patients in the spring. The food itself during the process of digestion acts as an irritant towards the gastric mucous membrane. Martin, "Diseases of the Stomach" p. 189 says "When digestion is imperfectly performed, there is delay of the food in the stomach, and the irritation is prolonged, showing itself in great
discomfort in the epigastrium, and often in actual pain. That this was so in these cases, was shown by examination of the stomach contents, determination of the stomach position, and by the return of the meal of the day, brought away a quantity of broken up food, in an acid medium, and great relief was experienced by its removal.

The treatment indicated was rest to the hyper-sensitiveness of the stomach. Washing out the stomach with warm water in the evenings, relieved the organ of the irritant residue of the day's meals, and eliminated that sense of irritation. The warm water itself had a soothing influence on the stomach, and made it more fit to do its proper work on the following day. That this was so, was shown, by better rest at night, and less discomfort on successive days, as the treatment went on; and by the lessened amount of residual food
found in the stomach on successive occasions, until finally a cure was effectuated. Sedative medicines had been tried in two of the cases, but with little benefit.

Martin. 'Diseases of the Stomach' p. 359.

I note this class of case as suitable for treatment by washing.

Zwald. 'Diseases of the Stomach' p. 452 says, "This massage of the stomach has a soothing influence on the hyper-sensitive gastric nerves, and an ordinary massage often unexpectedly relieves painful symptoms."

Case IV. In this case acid vomiting at night was the most troublesome symptom. Martin. 'Diseases of the Stomach' p. 81, says: "Hyperacidity may be due to the breach of digestive rules" or p. 82, "It may occur when the nervous mechanism is disordered." Probably both factors were involved in keeping up this man's trouble. The acid fluid acted as an irritant to the stomach mucous..."
membrane, and, as a result there was pain and vomiting. Erwald, "Diseases of the Stomach" p. 148, says, "as a result of this condition, we must consider atony of the muscular wall of the stomach." This was probably the case here to a small extent. Washing out the stomach with a solution of Soclii Biareb was evidently of no effect, for the vomiting stopped on the fifth night of treatment. The alteration in diet may have helped somewhat. Erwald, "Diseases of the Stomach" p. 418, says, "eating of potatoes temporarily ameliorated the symptoms." Ernest Hart, "Brit. med. Journal", 1892, p. 283, quotes Robin, "when there is undue secretion of H. clorhidrici acid, in the absence of serum or dilution, he advises giving Soclii Biareb. in small doses two or three hours after food." This man had tried twenty grain doses of Soclii Biareb, but with no benefit.
used in solution as a washing
biscuit for the stomach, it did good.
In addition there was the quietly
influence of the warm water, and
to Ewii & Wald, "Diseases of the Stomach"
p. 458. "and the mildly anaesthetic,
as well as the stimulating effects
on the muscular fibres of the
Stomach, from the Carbonic acid gas",
Case IV. In this instance the condition
of the stomach noted in I, II, III
had been prolonged for some time.
And in addition to the irritable
condition of the stomach, the hyper-
sensitive gastric nerves, had under
three continued peripheral irritation,
neuraly brought about an irritability
or irritability of the central nervous
system. Medical treatment had
been carefully carried out, but with
little benefit. Washing out the stomach
night after night as with success in
soon caused improvement in his
condition, and finally brought
about a cure. The undigested
particles of food were removed, and the warm water soothed and gave tone to the stomach. Peripheral nerve irritation being lessened, the central nervous system was quieted, and the patient's general condition improved. As the stomach improved, his diet was increased, and he put on flesh, and eventually became a healthy, well-conditioned man.

Case VI. This was evidently a case of hypochondriasis. Beyond a slight relief to the gastric symptoms while treatment was carried out, there was no benefit. Oswald, "Diseases of the Stomach," p. 257, says, "It has no permanent effect in hypochondriasis."

Case VII. In this case no cerebrospinal lesion had been found. No any course of peripheral irritation to the nervous system until irritation of the stomach tube showed the condition of that organ (stomach). Flatulence was occasionally present, but the
prominent symptoms, were remote nervous ones. Whether a disordered condition of the central nervous system led to gastric disorders, or, on the other hand, whether disordered digestion was the primary cause of the general nervous irritability, is matter for question. The amount of broken-up food found in the stomach, seven hours after a meal had been taken, indicated treatment to that organ. Systematic washing out of the stomach was done for a lengthened period, and great improvement in the patient's condition was the result. By this means also were found out certain idiosemenaics with regard to the digestibility of certain articles of diet. These articles were thereafter avoided in his diet.

Medical treatment had been tried with little benefit, but under this treatment his improvement was marked. The washing was done
by himself, always Martin. "Disorders of the Stomach" p. 357. says, "The patient, especially close with 'nervous' symptoms however, must not be taught this as a means of cure, since the continued use of the practice, detracts from the efficiency of medicinal and dietetic treatment." In the case of this patient, no medicinal treatment was carried on simultaneously with the lavage, nor did any seem to be needed.

Case VIII. In this case, the indigestion was associated with Chlorosis. Saurdby, "Brit. Med. Journal" Med. 19 1594 p. 592. says "It is noteworthy, that the chyme and motor functions of the stomach, do not necessarily suffer, even in the most severe cases of Chlorotic Anemia." Oswald, "Diseases of the Stomach" p. 469. quotes "Hartmann, Gluckovsky, and Pick, as having proved, by direct examination of the gastric juice, and functions of the stomach, that a true insufficiency of the latter..."
exists." Martin, "Diseases of the Stomach," p. 213, says, "In chlorosis gastric insufficiency is well marked, if the anaemia is pronounced." In this patient there was undoubtedly some deficiency of motor function, judging from the great delay of food in the stomach. There was irritability of the organ superadded. Treatment by washing out the stomach was very effective, and the woman made a quick recovery. The relief of the constipation was very marked. The washing besides soothing the mucous membrane, gave tone to the muscular coat of the stomach, and to the bowels as well. A pill of Ferrum Phosph. was given at the same time, &c. &c. After food, HarVitae goes so far as to say,"the change in the stomach is the primary change," and claims that chlorosis can be cured by relief of these disturbances." In this case, lavage speedily cured the stomach, but for the chlorosis iron was given as well, and continued, thus saving the
savage ceased.

Case IX. This treatment was pursued under great difficulties and with great drawbacks to success. That the woman had a gastric ulcer I feel sure. There was the great pain and the haemorrhage, (large in quantity) in January. There were also cutaneous changes, and a certain amount of dilatation. The washing out of the stomach gave her great relief, and I have no hesitation in saying that it was the starting point in her recovery, though that process was slow. How far one is justified in using the stomach tube, when there has been recent haemorrhage is questionable. Fleisher, quoted in "The Year Book of Treatment" 1894, p. 124. Advocates the use of large quantities of bismuth, administered through the stomach tube, in the treatment of ulcer of the stomach. After first washing out the stomach with water. Macafee, ibid, says, "the method is not only dangerous but..."
unnecessary; again the stomach tube should never be used when ulcer is even suspected." This is the opinion of most writers on the subject.

V. Martin, "Diseases of the Stomach" p. 124.

Cases X. XI. In these cases there was non-obstructive dilatation of the stomach, following an atomic condition of that organ, due to debility, originating from anaemia, anemia, confinement to the house, and vice versa meals. v. Suardy in the "Brit. Med. Journal," March 17, 1894. "The Common Forms of Dyspepsia in Women." The tube was used with great advantage in these cases. The quantity of un digested food, found in the stomach, some of it delayed for days, and undergoing fermentation, and the relief experienced by its removal, was sufficient justification, for the end of treatment adopted. The indications to be fulfilled by treatment, were, (a) to prevent stagnation of the stomach contents, to expel them, either upwards...
or downwards. 21 To check certain fermentative changes which developed in the stomach. Washing out the stomach with an antiseptic solution, fulfilled both these. Borax and Potass. Permangan. were the antiseptics used, and the washing was done in the evening. In addition to removing the mechanical overloading of the stomach, all the other benefits already mentioned, of ravenous, were obtained. As a result, absorption was improved. Swaud, "Diseases of the Stomach" p. 146: says, "D stagnation of stomach contents disturbs absorption seriously." The result of treatment in Case X. was very satisfactory. In April, two months after washing began, the dilatation of the stomach was much reduced. Judging from the lessened amount of liquid the stomach is capable of containing, from the gradually diminishing quantity of residual food found in it, and
from the general improvement of
the patient, one can reasonably
infer that the treatment is satisfac-
tory. Boundby, says "When there is
dilatation, the use of the stomach-
tube becomes imperative." Gwald "Disease of
the Stomach" p. 155. Strongly adva-
ently washing in dilatation. "In marked
dilatation with fermentation, he
prefers a morning wash." Martin,
"Diseases of the Stomach" p. 383. Classifies
three varieties of non- obstructive
dilatation, and p. 391, says, that except
when there is great dilatation with
bacterial fermentation, washing is
contra-indicated; in moderate dilat-
ation it is an emergency, and is
not to be recommended for continued
Dec. 9, 1893. p. 1268", after discur.
ing at length the medicinal and dilute
in treatment of dilatation, says, "If these
guns, surgical should be carried out.
Wells, quoted in the "Year Book of
Treatment" 1895 p. 111, says." Recol
Nourishment is necessary. When
cavage is carried out. Maguire ind
thinks this is not necessary. It did
not seem necessary in my cases.
Fauldby finds a 1% solution of
SoCl2 Salicyl to be the best antisepetic.
Bwald. "Diseases of the Stomach" p. 156.
Martin. "Diseases of the Stomach" p. 156.
give a list of antisepetics that
may be used.

Case XII. This was a case of dilatation
of the Stomach, following Conter-
ous obstruction at the Pylorus. The
washing gave great relief, and the
discomfort in the epigastrum and
the vomiting were greatly diminished.
Von Mering, quoted in the "Year Book
of Treatment" 1894 p. 121. gives the reason
for the increase in the Stomach contents
when the Pylorus is obstructed. He points
out that the absorption of sugar and
peptones in the Stomach, is accompanied
by an outpouring of water into the tracts
which cannot pass into the intestines.
on account of the obstruction.

Objections to the Treatment.

It has been objected to,


He objected to its use, in the case of the more refined classes of patients.

Ewald, "Diseases of the Stomach" p. 12.

He replied to him, and says, "I could more easily mention the names of very distinguished people, who willingly allowed the introduction of the tube, and the washing out of the stomach. If the stomach contents be run into a covered dish, the disgusting appearance and odour are minimized. The actual passing of the tube, is not a very pleasant proceeding at first, but after it has been done two or three times.
it is by no means a formidable operation, and I generally allow patients to do it themselves. My own experience is, that the relief afforded by washing is so great, that the patient very soon overcomes any feelings of repugnance toward it.

II. In the case of 'nervous' patients, it has been said, that it is very apt to be abused by them. This may be said of any means of treatment. Any abuse can be prevented by always using it under immediate medical supervision.

III. Because some food is lost altogether to the patient, i.e., comes back from the stomach, in the liquid, without the patient deriving any benefit from it. This loss of food is small, and does not affect as preciously the patient's nourishment. For as treatment goes on, it lessens in amount from day to day, until when a cure is effected, there is no return of food.
in many ways.

(1) By passage of the tube into the air-passages. This need never happen if ordinary care be used.

(2) By injury to the oesophagus: There is no risk of this if a soft instrument be employed.

(3) By increasing vital thoracic pressure when there is aneurism. Ewald. "Diseases of the Stomach" p. 85. Quote death occurring under these circumstances, from rupture of the sac, but questions whether increased blood-pressure on the innermost wall of the aneurism, can be caused by the introduction of the tube into the oesophagus.

(4) By injury to the stomach mucous membrane. The use of a blunt-ended tube prevents this happening. Ewald "Diseases of the Stomach" p. 14. Quote case where a piece of the mucous membrane was torn off, and no lasting damage to the stomach resulted.
(5) By causing fatal haemorrhage;
where there is an ulcer of the stomach.
The weight of opinion contra-
indicates its use where ulcer is
suspected.
(6) By causing fatal intoxication. In cases
of diluted stomach. Collier, "Cancer" 1891.
Vol. II p. 1251." Quoting three cases where death
occurred from tetany following washing
out of the stomach. Stöbel, "Diseases of
the Stomach," p. 261. Quoting twenty-three
cases, with a mortality of 72%, where
tetany followed washing of the stomach.
He says, "When the number of accidents
is compared, with the innumerable
times the tube is passed safely, it
becomes quite insignificant." R. Hill
Brown, in the Lancet, March 21, 1896 p. 465
Quoting a case where systematic lavage
of the stomach, was followed by the
progressive advance of the tetany.
Which ended fatally. He says,
"assuming that the tetany is due to an
counter-ionization, washing out of the
stomach should raise quite an opposite
Ewald. Diseases of the Stomach." p. 145. Evokes the possibility of the diarrhea being due to reflex processes proceeding from the stomach, and gives analogies collected by Miller, e.g. the convulsions caused by worms. Kussmaul, is inclined to attribute these attacks, to a sudden deficiency of water in the stomach.

(4) By causing fatal syncope, from an action on the sympathetic plexus, following the introduction of a large quantity of liquid into the stomach. F. Fenwick, in the "Practitioner." Apr. 1892. Martin, Diseases of the Stomach," quotes a case where death occurred six hours after a tube had been passed into the stomach. V. L. D. F. Ewald. Diseases of the Stomach." p. 156. Says "this appears to me to be simply a coincidence.

(5) By poisoning, from the antiseptic used. F. Fenwick, quotes three cases of death from this cause, in one of the cases death occurred in six days, after leaving a 2 5/3% solution of boric acid in the stomach.
In my own cases, when I used an antiseptic in solution, I always washed out with water alone afterwards, and was careful not to leave any of the antiseptic in the stomach, nor do I think it necessary to close the stomach if washed out with an antiseptic liquid. Two or three times, it ought to be in an aseptic condition. In my cases, I got good results without leaving any of the solution in the stomach. If there is a risk of poisoning in this manner, why run it? There is no necessity.

To sum up then, Ewald, "Diseases of the Stomach" p. 261, says: "When the number of accidents is compared with the innumerable times the tube is safely passed it is insignificant," but he recommends the necessary care.

Leube, says: "It is one operation without risk." Martin, "Diseases of the Stomach" p. 314, says: "It has been much abused and must be used with circumspection." Smellie in the "Brit. Med. Journal" March 31, 194
Says, "There is reason to believe, the tube is used too little in this country, too much in Germany."

Taking everything into consideration, I consider that with reasonable care, and in suitable cases, washing out of the stomach is a most valuable method of treatment, and free from risk when the "necessary" precautions are taken.

________________________

Conditions suitable for Lavage

Martin, "Diseases of the Stomach" p. 359. Classifies the conditions that point out to "washing" as a means of treatment. Attfield, in the "Practitioner" Feb. 1892 p. 108, also classifies the conditions under which he thinks Lavage most suitable, but is too restrictive in my opinion. My own experience is, that it may be used with great advantage.

1. In Dilatation of the Stomach, with or without pyloric obstruction, and with or without bacterial fermentation.

2. Where there is no dilatation, or very slight,
but when a meal causes discomfort, pain, and vomiting.

III. In Chronic Catarrh of the Stomach.

IV. In the Hypertrophy Associated with Chlorosis, and in its early stages, if the patient be got in time.

V. When there is increased and prolonged secretion of hydrochloric acid.

VI. When there are remote nervous symptoms, and examination of the stomach contents, points to digestive disorder, i.e. Case VIII.

Advantages of the Treatment.

[A]. As regards aid in Diagnosis, as the treatment progresses:

The system of test meals, and the examination of the digestive processes in these, was not carried out in my cases. In such a busy practice as the one I assisted in, this would have been impossible. Ewald's 'expression method' was used in one case to find the condition of the first part of the stomach. The salt test was once used, but the result was not satisfactory.
found in the Brit. Med. Journ. March 17, 1834, p. 542. Says "This work (a systematic examination of the gastric functions, by means of hot meals) necessarily takes up a good deal of time, and I do not suggest that every busy practitioner can investigate his cases so completely. In the majority of instances it is not necessary to do so." Martin, "Diseases of the Stomach," p. 152. Says "In the great majority of cases, it is not necessary to apply the test for the functions of the organ, except in those cases, which appear but little amenable to treatment of any kind, and in cases of suspected cancer." Still while carrying on this treatment, one gets information.

I. As regards the capacity of the stomach, and from the released amount of liquid which it was capable of containing, as treatment proceeded, how far dilatation improved.

II. As regards individual idiosyncrasy of the digestibility of particular foods: e.g. Case III. whenever he had roast chicken for dinner, it was found in his stomach seven hours afterwards, in large quantities, and...
Seemingly unaltered; whereas if he had had beef or mutton for dinner, it was all out of the stomach by that time.

Broadbent, in the "Brit. Med. Journal" 1893 p 1264, advises that the diet in dilatation of the stomach should be regulated to suit the idiosyncrasies of each patient; and from what I have observed, I am certain that attention to this point will be advantageous in the treatment of all dyspeptic conditions.

III. As regards the motor and chemical functions of the stomach, from the amount of residual food in the organ at the morning wash, and from the length of time it had been delayed there, from the appearance (naked eye, or microscope) of the stomach contents, and from the reaction—acid or alkaline—on each successive night, the effect of the systematicalewearage could be noted.

As regards treatment, itself:

I. It at once relieves mechanical overloading of the stomach, and more efficiently, and with less distress than by giving an emetic.
I. The stomach having been quite emptied, can enjoy a period of rest.

III. The glandular structures are cleansed by the warm water, and a healthy reaction established in them.

IV. The warm water has a soothing influence on the gastric nerves.

V. Bacterial fermentation can be effectively checked, by putting an antiseptic in the liquid used.

VI. It quickly relieves obstinate constipation.

VII. The process acts as a gentle massage to the stomach, structures, and improves the tone of the organ - secretory and motor.

VIII. The treatment is simple and easily carried out.

IX. It is very effective, as borne out by experience, and that in cases where medicinal treatment, gave little relief.

X. It effects a cure more quickly than can be got by medicines.
Remarks on the Apparatus for Stomach Exsanguination.

In my cases I used a tube with an unperforated blunt end, and having two side openings. The tube was made of red rubber of medium softness. Ewald prefers a red rubber stomach tube, with the lower end open, and having one large anterior very conical, and a number of smaller openings. Martius recommends a tube having its lower end slightly conical, and perforated, and with two side openings.

Both employ suction at a elevating and depressing a funnel. Ewald prefers a large glass funnel of two quarts' capacity.

For auto-exsanguination, an orifice at the raised above the level of the foot with head, can be used, having a connection with the stomach tube, by means of a piece of rubber tubing, a stop cock being employed.
March 30, 1837. describes a very simple and efficacious plan for washing out the stomach with a continuous current of water.

In conclusion I would quote Ewald, "Diseases of the Stomach" p. 63. "I consider it entirely irrelevant, whether we use a continuous stream, with a double current tube, or whether we fill and empty the stomach alternately; if anything I prefer the latter, since the rapid rushing and depression of the stream, and all the fluid in the stomach more forcibly, and mucus and other substances caught in the folds of the mucus, may be more easily removed mechanically."

**Literature consulted.**

Ewald; "The Diseases of the Stomach".

Martin; "Functional and organic Diseases of the Stomach".

Mr. Bride; "Diseases of the Ear, Throat, Nose".

Fage; "Principles and Practice of Medicine".
Friday 12th "Clinicae Manae"


Maguire: "Year 1890. of Treatment 1892 to 1896,

Authorities quoted, (in addition)