Thesis for M. D. degree

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Handkrift

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Petussis or whooping cough.

The name Petussis is derived from the two Latin words Petusus et tussis, cough. The other well known name— whooping cough is undoubtedly derived from the peculiar hooping sound which accompanies a cough. It also has a great variety of other names, in different localities by which it is known, such as whoo, koast-tussis, cornelli, tussis africana, coqueluche, etc.

It is an epidemic contagious disease of the respiratory mucous membrane. It is one of the most common ailments of children, though not exclusively confined to them. It may, at first, frequently affect adults of both old and young. According to best of paucity, in London south among the causes of death in children under
The years of age. Pneumonia, Convulsions, and Hydrocephalus being only the more fatal disorders.

Clinical features.
It consists of three stages:
1. The Catarrhal or Inflammatory Stage
2. The Spasmodic Stage
3. The Convalescent Stage or Convalescence

In addition to these three stages, according to James there is a latent stage, corresponding to the Incubation Stage of the Fever, for he says: "...after a latent stage of perhaps 6 or 8 days" (2) that this is so, has not been hitherto proved; indeed I find but little notice of it in any of the older Medical Text books. I am sure in his work gives the statistics at the fact I gave his attention to that, and it is extremely likely that there is a period of latency, yet this cannot be taken

as by any means proved.

The duration of the Catarhal Stage
varies from two days to six weeks, the
more severe the Case the shorter being,
as a rule, this Stage. Its average duration
is known from three to fourteen days.

Dr. Smith says he has met with two
Cases, both puerile, the age of five
years, in whom no Wassermann's crust
was noticed, in which, besides there
was but one Napp namely the Catarhal

This, I think, is not infrequently the
Case, for in my own work in America
I have met with Cases which seemed
to me to bear out this assertion—case
where children in a family, Sunday
whose members are a Puerile had well
developed Herpes crust, had back
ulcers which resembled Herpes crust in
its Catarhal Stage, but never become

Assumed the distinctive features of the second stage.

An attack of Hooping-cough usually begins with Cataract at first. There is little to no difference between it and common cold except that sometimes the cough is attended with a peculiar痉痉 sound almost from its beginning. The patient suffers from congestion, irritation of the air passages, redness of the throat. The eyes are somewhat irritable and injected. The cough is apt to occur in paroxysms and the worse as night. This nocturnal increase of cough may, as a rule, be taken as indicating that the disease has not yet reached its height. A nocturnal increase in frequency indicates that the cough is at its decline. I that the patient is getting better. An Auscultatory
the chest. Some loud wheezing is heard. It differs for many cases, known
from ordinary cataract, in that the
flare is higher; and there is often a
less pronounced irritability. Severe has
known this attack to be repeated forty or
fifty times in a minute! Gradually
the Catarhal Symptoms disappear,
but the cough continues, it gets louder
and becomes more offensive. As it
gets worse, its true character is revealed
out of it passes into the
Spasmodic Stage. This stage may last
from three to four weeks, an almost
indefinite time, being in some cases
very chronic. It knows a period from
thirty to sixty days.
It commences as a rule gradually
the patient gradually passing from the
first to the second stage without any

Married & sudden change till the well known & pathognomonic cough is recognized. The cough occurs in paroxysms & is most at night, at any half at the commencement of the stage. The patient is aware from a peculiar tickling in the throat. In some cases a sense of tightness, almost concurrent to actual pain, in the chest, he has an anxious, wistful expression in his face, he throws down his playthings & instinctively clings to something for support. In these particulars there is a curious likeness to Asthma, in both diseases is the patient forewarned of an approaching attack, in Asthma, does the patient look for firm support to help him in his trial, in fact, the diseases resemble each other in many points both being spasmodic attacks of the
Pneumonic Inflammation. If the patient be once examined, his pulse will be found to be accelerated; his respiration hurried, his temperature somewhat elevated; and the surface of the body already febrially perspiring. The paroxysm commences with a deep, harsh inspiration, con-

considerably prolonged, then follow a series of short, sharp, inspiratory efforts, short coughs, at first harsh and dry, by degrees becoming bronchic; these may be as many as thirty a minute; he feels as if tell of wounds of every blood vessel in his body would hurt; his face is deeply congested; his lips blue from the absence of these inspiratory efforts. Then comes a deep but very rapid inspiratory effort—The rush of air through the narrow chink of the tracheal cartilage; the flexible hooded throat moves.
which has given to the disease its name; in some cases however Caury
a crowing or whistling sound; but in all these is the rapid deep
inspiratory effort. This may fail
the paroxysm or the whole may
be repeated three or four times, till
at last a quantity of feisty 
diaphoretic perspiration and mucus is brought
up, or the child, not un picturesque
vomits, the paroxysm is over.
If he vomits, the part is at all
brought with a craving for food;
he then vomits his play, it is
perfectly well, in uncomplicated
cases till he is forewarned by the
symptoms already mentioned,
that another attack is imminent.
Callin remarks that, except in a vomiting unusually facile case,
after the second fit of convulsion I usually puts an end to the paroxysm.

The paroxysms may last from a few seconds to a minute to an hour. During its continuance I have already noted that there is great general contract with the man of the lips and litoral of the face, in addition to this there may in some cases be hemorrhage under the conjunctiva, from the nose, a corn from the ear, in some cases the membrane tympani is known to have been ruptured; the urine of feces are often also passed involuntary from the stomach.

The hoars is as I have above mentioned, caused by the Burke of inspired air through the trachea left open by the glasmodically contracted glottis. It is often a source of relief t
the cautious watcher to hear this
hoop which shows that air is once
more entering the lungs, the child
having perhaps gone as with the
short respiratory efforts till at last it
would seem as if it might cool
save it from suffocation, that it were
possible that it could again bring
air till at last they cease. Till the air
is drawn through joints causing a
wheezy, a hoarse, distant hoast
than before, but still a hoast distant
enough to be welcome as a sign that
air enters the lungs. That the child is
still safe. This kind of paroxysm is
however cut the look as in some
extreme cases it may go as till
there is complete closure of the joints,
several convulsions and death.
In the earlier paroxysms the voice
Expelled to Reality I then, I be justified as this is the case the fits are the length I more violent.
For degrees the expectation becomes more abundant, I sometimes is very employ, at the same time it is thicker and more easily brought up I be that to account the fits of convulsion are less protracted.”

There may be only two or three paroxysms in a day or as many in a single hour. It may be called a mild case in which there are less than twenty paroxysms in the twenty four hours, I a more one in which there are as many as fifty a fifty.

Watson says, “in an uncomplicated case, if you listen at the chest during the interim to come, you will probably

(Watson, Principles & Practice of Physic, Vol II. p. 67.)
hear the sounds that are proper to larynx. In some degrees of bronchus asthma it is possible that there may be some noise. This is if you press the throat you feel the natural healthy sounds. But what happens when you apply your ear to the chest during the paroxysms of coughing? Why, the information from us to the chest is very curious. You may perhaps hear between the short exhalation of the cough, some breathings of wheezing or viscous breathing, but during the long bronchial noisy inspiration that succeeds, all with the chest is silent. This is supposed to come from the larynx; it's probably larynx which the air passes towards the larynx through the clavicle of the larynx, which is harmonically narrowed. It may also depend in part as dience
Supposed upon a harmonie anelasticity of the muscular \\
contractile fibre of the \\
bronchial and their branches. When the pit is \\
at the end the ordinary sounds of \\
healthy or of catarhcal respirations are \\
drowned: \(\text{1)}\) As to the first part of \\
this statement, there is no doubt, in \\
most cases a certain amount of Rind \\
is heard in the chest during the \\
respiratory effort. With in cases quiet the \\
complicated. \(\text{2)}\) Mr. Thomas lanpat, for \\
I say that during the respiratory efforts \\
you may perhaps witness of wheezing a \\
peculiar breathing between the respiratory \\
efforts. I have in many cases pria \\
teen; this statement is anecdot \\
carefully patting it down a synoyn, \\
to see if this be the case & it has \\
certainly seemed to me to watch, \\
a child that it is utterly impossible \\
an air to suit the chest between the quick respirating efforts, they seem to succeed in each often without any failure whatever. I have also examined the chest with the aid of the stethoscope and I have failed entirely in all cases to detect the slightest motion in the chest during the respirating efforts. Lee says with reference to this point, "If you listen to the chest during a fit of coughing cough, you will hear no sound whatever in the lungs." This seems very strange to believe that the moisten way in which air enters the lungs during the respirating hoist is due to the slow and incompleat way in which it is allowed to close by the pharynologically closed pholi & smaller branchi & I would further suggest the chest wall

In it seems to me that they have much to do with the gradual spam. Watson says, "all within the chest is silent" during the hours, but I have, in many cases, heard air passing into the lung, as West says, "through the larger bronchi.

This stage usually reaches its height in from three to four weeks after the commencement. If the tongue be now examined, there will be found, in most cases, small ulcers in the neighbourhood of the pectoral, due to the tongue pressing on the teeth during the fits of convulsions.

The paroxysms often occur without any apparent special cause, but after swallowing, excitement, accumulation of phlegm or will act as an exciting cause. The urine is in many cases

[321 West. Diseases of Children. p. 408]
Baccharine, due, it is said, to conjecture of the offence centres. That this is to be seen cases, I have myself proved. Have the record of the Draught of the basin in the cases of Petrus in the hospital. When I have attended, in three I found no trace of dysar, in four I found traces, in the remaining three very distinct proofs of the presence of dysar.

The chest yet bore for about a week l after remaining at its worst in about Austin week a frightful, it gradually begins to improve; then the insensible St. Aerobatios are less acute & the fit is are less frequent.

Convalescence. Gradually the cough loses its paroxysmal character, the peculiar inspiratory noise dissipates, it becomes less frequent, the breath
become thicker & more prevalent, till in a few weeks it gradually disappear. The period of convalescence however may in some cases be considerably prolonged by the以上 Causes, as in Many cases a Phlegmonic Cough remains even though the child be otherwise perfectly well. Again, from improper diet or from catching cold a few days before cause a Cough may appear though all trace of it had almost disappeared. It is wise obstinate to write a caution than the Enlarging of Cough is often a Summer.

Complication. The high Mortality of Diphtheria Cough is due principally to the complications which so often, unfortunately attend it; the Exantheon of Diphtheria Cough and with some other complication such
as whooping cough is too much for young children to bear & as before mentioned, the young, the child the same point is the promptness. If the whooping
are ordinary whooping attack of
whooping cough a young child, you
cannot help being struck with the
extraordinary promptness which
attends it, if to this be added
the constant irritation of hooping
cough, it is not to be wondered
that the complications, reasming
the two diseases, make the case
a very serious one. According to
best known complications cause a
slight the higher mortality than do
those connected with the whooping cough. As he
says “Of 35 children who died
under any cause of hooping cough,
17 finished in consequence of the
Supposition of Bronchitis or Pneumonia is from congestion of the brain, from "Convulsions coming on during a fit of coughing or from Hydrocephalus." Complications also greatly add to the difficulty of treatment, indeed in many more cases of Hooping Cough complicated with Bronchitis, Pneumonia, nothing seems to be of the slightest use in the way of treatment, nothing seems to make any improvement in the course of the disease at all. The little baby is from bad to worse with startling rapidity. I think two diseases deplore more still I care in their treatment than Hooping Cough complicated... complicated. The complications I deal with are:

1. Bronchitis
2. Pneumonial Phthisis

(West, Diseases of Children, p. 415.)
4. Pneumocystis
5. Collapse of lung from
6. Intraal convulsion.
7. Clinic of Intraal convulsion.
8. Tuberclae Hydrocephalus.
9. Pneumonia.
10. Chicken pox.
11. Constipation
12. Exhauston

1. Bronchitis. There is in most advisory cases of Tuberculosis a certain amount of catarrh of the larger Bronchial tubes, but it is when this inflammatory action extends to the smaller tubes that it becomes really a serious complication. It is indicated by the usual clinical features of capillary Bronchitis, Accelarated pulse, high temperature, rapid respri.
...atmos. In auscultating the chest, the course of fibres and heart all over the lungs. There is usually one of the rapid-irregular respiration, i.e., the chest are dilated at every breath. When the bronchites is at its height the chest loses its less its phenomena.

character. This last I have carefully noted in many more cases; but still I think, that in most cases there is peculiarly of the chest, there still seem to be a kind of sperm...about it. Different entirely from the ordinary chest of Bronchitis, being once a deep and first cough, with great elevation of the face accompanied with a kind of hoarse voice till the expectoration is brought off. As in ordinary Bronchitis, after the first few days there is great retention of phlegm.
which at first appears, gradually assumes a more insidious nature; this
affair gradually diminishes with the clearance of the bronchial tubes
the spasmodic cough gradually returns a resumes its habitual characteristics.

Bronchitis, if it be a real complication, that is to say, capillary
bronchitis, is a true complication it is true and pneumonia, which
complicating pneumonia, is a real fact cause it have such a high
mortality. West says: “Pneumonia, much more rapidly in cases of this kind
than under any other form of affection of the lungs which comes as in the
course of hooping cough” (1)
Pneumonia & Pneumonia & Otitis. This is another
very serious complication it is attended by much the same symptoms as in

Bronchitis, which seldom often leads up to it, it is co-existent with it. It is difficult in most cases to distinguish in children between the physical signs of each; there is noise in breathing a peculiar respiratory more in ill-defined patches of dullness may be made out by very careful percussion.

Bad cases of Pneumonia may come on from back to front till Pulmonary Phthisis is developed, the little patient dies from a cavity in the lung, principally caused by the pleurisy. Phthisis is true tubercula and Phthisis may known, come on independently of any acute attack of Pleuraxis during Habbing Cask. 3. Dilatation of the Bronchial tube.
This is another complication which is apt to be developed during the course of a case of Hobern's cough is sometimes permanent. It is due to two causes: (1) Inflammation leading to paralysis of the Branchial tubes. (2) Disturbance in connection with the site of the cough.

4. Emphysema. This according to Lewis Smith is one of the most common lesions in the infants of feeble constitutions & he attributes the chief cause of the Emphysema in these cases to the impaired nutrition & change in the molecular condition of the tissue. Of that in Deere & Prostheko the child becomes feeble & cachectic. While Rovise says: "It is the result of lackation of the air cells, in children.

(1) Lewis Smith Diseases of Children. p. 265
often retrolobular and occasionally spread through the root of the lung or the connective tissue of the neck. Thus it probably seldom occurs in any but weakly children, it is the result of the violent expiratory effort, namely, the cough. These are two or three theories as to the actual cause of the production of this lesion, but it is out of the province of this subject to enter into them here.

5. Collapse of Lung Tissue. This also occurs as a complication in some cases, and according to some is a result of all uncommon case, being often described in Pneumonia. Taunton says: "we are indebted to Sir James Hector and subsequently to Sir James联动 for distinctly pointing out that when has made a crush prove fatal, it

(1) Boitome. Practice of Medicine, p. 144.
Generally does not by giving rise to Pneumonia, as has been thought, but by reducing Carcinomatous inflammation of the bronchial tubes attached with collapse of a portion of the lungs. This is extremely probable, as frosty winter Pneumonia so often outset patches of collapsed lung, whilst living life it is very difficult to clearly distinguish in cases of Carcinomatous Bronchitis whether a patch of dullness be due to Pneumonia or to collapsed lung. The cause of this obstruction is generally from the smaller tubes being blocked up with mucus, but there are other causes, in Sir Thomas boatman says, but there are other causes, to one of which these young people are also liable. Whatever impedes the free and full midiaught of air.
May be a co-operating cause; the
sham therefore, which narrowing the
lumen diminishes the supply of air, a
flaccid abdomen, hinders the contract
of the diaphragm; weakness of the
muscles of inspiration, arising from
nerve debility. And there is yet
another accessory cause, which is
peculiar to the early years of life. In
the full inspiration of an adult the
thorax is enlarged by the depression of
the upward movement of the mediastinum
and by the trachealis descent of
the diaphragm. But in young children,
when the inspiratory act is difficult
and forced, the ribs yield under the pull
of the contracting diaphragm, which
admits them inward; thus the full
expansion of the lungs is limited. In this
way permanent deformity of the chest
is sometimes produced. We need not wonder that, under these cir-
stances or less of pulmonary collapse should be a nearly constant phenomenon after death from hot dry heat. Hence it would seem that collapse of the lung is a condition very early brought on, as I very rarely passed over hi ever diagnosed, so I have seldom seen it made out or clearly diagnosed though there cannot be a doubt that, from the authority quoted it may frequently occur.

6 d 7. Internal Convulsions &
Clonic or Botanic Convulsions.
Convulsions also occur d'are of two
kinds, with clonic convulsions of all
the muscles of the body a attacks
Vertebro-legyptism: Stidulus. They
Occur primarily in young children

(1) Watson: Principles and Practice of Physic, vol II p. 30. 69
who are lecturing on the phosphorescent children. Dauphins from the source attacks both the onset, height, and decline of the disease. The child seems more heavy and drowsy, complain of headache, and the usual signs of cerebral convulsion. If the fits of convulsions seem to be more violent without adequate cause, then also it seems, perhaps, independently of the cause, without obvious cause, ridden from the medullae cerebri, may be anything from a diseased stomach, then the attack comes as a convolution enters when brought on by a fit of convulsion. Committ as independently of the cause. Positive says, "they may be due to the action of the brain which attends the paroxysm of such. In other words, they may be
ordinary attacks of eclampsia. a
attacks resembling those of laryngismus
stridulus, respiration being arrested
by pharyngeal closure of the
glottis and inapparent dyspnoea,
attended with convulsive movements
of the face and eyes." (1) The former variety
is the more common.

It is of great importance to form
a correct diagnosis before the actual
onset of the convulsions in this
variety. Many cases may be detected, by the
complaining
blisterness of the face and by the usual
aspect of the child. With reference to
this, Dr. Asplund says, "In all cases
of febrile convulsions, when chills, followed by
burning heat of the surface; pains in the
head, with obscure rales of the
respiration; a fixed, brilliant, dry and
familiar appearance of the eye; habitual

Ill. Britow. Practice of medicine. 1844
[Handwritten text]
Complication B. In the practice as us to watch carefully the child in the worst cases we can, and in great cases, forewarn the friends of the onset of this dread complication.

The complication generally occurs after a fit of convulsions and is usually fatal, though in some cases death may be averted by the use of appropriate remedies. In fatal cases there is usually formed to be considerable congestions of the brain in some cases rupture of the cranial vessels with extravasation of blood.

8. True tubercular hydrocephalus. But says that "true tubercular hydrocephalus is one of those cases with as a complication of hydropic cough...."

The effects of its differentiation should never be forgotten in the case of weakly
children who have long suffered from
Rose hospidy cusa. (1)

9 x 10. Measles & Chicken pox. It is
suffered by one that there is a peculiar
relation between hospidy cusa & these
progs. best says "the relation that
appears to exist between it & two of
the Enteritis from namely Measles &
Chicken pox." My belief is,
that the occurrence of any one of these
disease during the Epidemic prevalence
of another, increases the liability of the
child to become afflicted by that which
is Epidemic & that an exacerbation
of the form of hospidy cusa & the
appearance of these Urtis illness than
the local symptoms account for is very
likely to be due to the approach & the
appearance of Measles & of varicella (2). He says
also that these forms may produce

(1) West. Distances of Children. p. 415
(2) " " " p. 420
Just bulky an abatement of symptoms, but they cure the hooping cough. It is difficult to see what possible connection there can be between an indisposition such as measles or an epidemic serious disorder as hooping cough is, were it not stated by such an eminent man as Dr. Wood, we would pay little attention to it. Still being non-shanty experience I have been in three epidemics of hooping cough, one at Hawick in July 1878 in which measles (Roth.) was present also at two in Hawick that year, in the dairy of 1879 and dairy of 1880 with three latter epidemics in measles prevailed at the same time. But the theory which I would venture to put forth, the explanation
is this, that the atmospheric conditions which favour an outbreak of either of these two fevers also favour an outbreak of Tuberous Croup; that these can be any real connection other than this between them appears to be impossible. As to the absence of symptoms caused by Measles a Varicella in a Case of Tuberculosi, the same thing occurs when combination of symptoms complicates Tuberous Croup, but to this end it is not necessary to say that Measles or Varicella may cure Tuberous Croup, this is a most extraordinary statement and one that I quite fail to understand.

On the other hand, I have seen many cases of Tuberous Croup very much aggravated by the death of the child from a death warrant then join.
The case relates a case complicated with Pneumonia, enlarged bronchial & mediastinal glands in which the supervenient of influenza proved rapidly fatal. He says, "The case affords a striking example of the supervenient of an acute upon a chronic affection of the rapid downward progress which followed it. But in the complication of influenza the case might have dragged on longer."

At Harwich I had a case of a child with Pneumonia, complicated with Catarhal Pneumonia, Pneumonia, Measles were also added to the list of the poor little patient, rapidly became to their combined diseases.

But on the other hand I have seen cases in which Measles did seem to just only modify the hooping cough but to very slightly injure it after 10 days. p. 505. loc. cit. vol. xiv. 1879.
the disappearace of the fever.
1. Sometimes it is in most cases an
accidental accompaniment of the disease;
but in some cases it may become
a complication, being present in the
resinuous degree of producing great
dehility & viatration.
2. Dejaution, under this head I
include Billets, disordered state of
the bowels, of which we have brouht an
occasionally from the Dejaution except
upon a long & tedious attack of
boilings calf. I. Smith says in the above
of Renns disease, that boiling calf
is not only uterine with nutrition while
actually in progress, but also leaves
beinick of a chronic disarrangement of
the bowel, which often produces Extreme
Emaciation & may favour the
occurrence of very treag diseases.

(1) Rustae Smith, Walking disease of children. p. 177.
Children also sometimes seem to die from the exhaustion of hooping cough. Once a flexible, the child is to be stroked down by the medicament to completely exhaust the little patient's strength.

Pathology. The pathology of hooping cough is very obscure. There are various cases of the catarrhal affection of the mucous membranes of the air passages. The medulla oblongata of the brain are said to be congested, and the lymphatic glands are said to be enlarged with the branches of the vasa inflamed. Some attempt is made to explain that the enlarged lymphatic glands form upon the vasa inflamed a new lymphatic system similar to the inflammatory gland in swine. This at first sight seems a
Not plausible theory, but it is also a fact that these enlarged bronchial glands are found in many other pulmonary affections, they are caused by an inflamed bronchial mucous membrane and thus form some quite sufficient cause for them being enlarged in particular.

It is said also that the lungs never is found reddened in its course if inflamed, but this is not a constant phenomenon. It may be due to hematocrit change due to the multiplication of the tissue in general inflammatory change within the tissue during the course of hooping cough.

In fact the pathology of hooping cough is hidden in obscurity, owing to great fault to the difficulty of getting true cases of uncomplicated pertussis.
StAmiue.

Slightly there will be found lesions in the lungs due to complications such as congestion of the mucous membranes of the air passages & secretions in the bronchial tubes, pulmonary collapse, dilatation of bronchial tubes, infection. Extravasation of blood within the cavity & pathological changes usually occurring by the various complications.

Causes. It is more common in males, especially in children. It may occur in the first week of infancy, it is rare after the age of 10, but occurs occasionally in adults. As an example may be mentioned a well distinguished member of the medical profession who had a stroke attack during the last year. It is epidemic & contagious but may be sporadic. It may be carried by
Somite or by the air. The period of
infection is not accurately traced out, but
it is known probably through the second
stage of the Cold. Cold, damp, weather favours its
spread. An attack often confers
almost complete immunity from subsequent
attacks. Pristrow says "It has been
much discussed whether this disease
is essentially nervous or a purely
inflammatory condition of the Respiratory
Mucous Membrane. It seems probable
however, that it is not strictly either
the one or the other, but that it is like
other infectious diseases the result of a
virus, which affects more a len the
whole system, but has a special
tendency to involve the Respiratory
Mucous Membrane, producing in it a
slight but specific inflammatory
change, to the effect of which as
the peripheral ends of the Pneumogastric nerve, the chest, with its peculiar characteristics is due. This is confused by the fact, that it is evidently from the multiplicity of mucous surface that the contagiousness of the disease is chiefly, if not exclusively. Smith & Smith The Real Cause of Hooping cough is probably to be explained as above, but until some more definite information is obtained concerning its pathology, the Cause must necessarily remain uncertain. There can however be little doubt that the disease is connected with some abnormal state of the conjunctive function of the Pneumogastric nerve.

Diagnosis. The diagnosis is in a rule easy, in the early stage, but it is important to diagnose it in the first.
Cough be very violent, the catarrhal of relief short, it subsides, the breathing hurried, the rest at night much disturbed, the appetite very bad. Occasionally the prostration of my duration of the second stage may prove fatal by exhaustion, but it is rare, or the whole for an uncomplicated case to prove fatal. The young, the child, the weak the prostration, in also if he be at the period of breathing a be fatal.

Complicated Pertussis has a very high mortality among children, the prognosis being very grave in cases complicated with acute Bronchitis, a Pneumonia, Pneumonia, as a complication, in either form, but more especially internal Croup, in Croup, are specially fatal.

Maternal. Probably there are
The disease in which many remedies have been tried but none failed than in hooping cough. It has been a fruitful field of enterprise to many quacks and ensnaring a fruitful field of disappointment to many honest parents.

In the first stage the child should be carefully prevented from catching cold, should be kept in doors, if possible in a room which should be well ventilated without being draughty, warm or a too breathy of about 50°. His diet should be light. And in this stage as in the others he should wear flannel dress with this.

Should the catarrh which accompanies this stage be severe, mild emetics or it at any may be applied to the child, together with expectorant and saline medicines. Should there be very much wheezing, it becomes necessary to give a small saline followed by
Small doses of Bromide of Pota$tium act as a specific.

The Second Stage is the period during which active treatment is most required, and is most likely to be of service. The same hygienic conditions must be observed as in the first stage. Special attention must be paid to keeping the child out of all draughts and from very chance of catching cold.

Many specifics have been landed in the cure of typhoid fever. Among them are, Hydrocyanic Acid, Belladonna, Oride of Zinc, Bichloric Acid, Anapetala, balsam, Cocalical, Bromide of Potassium, Bromide of Ammonia. The remedy in which I put most faith is that I have found most serviceable to small doses of Belladonna 8th Proof a little
The nostrum has been digested of quills. I have taken six pills containing 1/4 of the extract of the leaf of Belladonna added to an empty 1/4 pint each in the morning and every evening. I recommend it as above mentioned from the distinct close of the extract along with quinol at least and its medicinal effect seven days.

I have occasionally employed the atropine in place of Belladonna to dose of about 1/4 gr for young children as an empty 1/4 pint and the next thing in the morning, I then had the fit control every 24 hours following. Brown-Kynard maintained that the duration of the disease to far, as the neuropathic element is concerned might be abridged by doses of atropine sufficiently strong to produce toxic effects.

The mixture of Belladonna may also be
tiled in boxes of from three to five dozens two to three times daily.

Mr. J. Wigglesworth says he "heals all cases of horsefly cast exactly with a solution of atropine of the strength of 1-120th part of each minim, from infants two months old to the adult. He begins with 1/20th part (one minim of the solution) in children from one to four years of age; this is kept on the place at recurrent exposure; and if in very severe cases he may add 1/20th to be given once a day, but when the symptoms paroxysms are very severe, he orders half the dose to be repeated about an hour after taking. He forms of the doses obtained by its use thus: 1. There is a steady diminution in the Number of paroxysms. 2. There is a diminution in the duration of the paroxysms. 3. There is a change in the
character of the hook; as if the verbal
words were not so closely approximated.
Further, if the Atropine is withheld the
beneficial effects derived from it
intrinsic.

I have myself seen the same effect
with the Extract of Belladonna, which
I believe to be equally good.

Davis recommends Colchicum.
In best, strongly recommends Hydrocyanic
Acid, he says he “ordinarily begin with a
dose of half an ounce of the Acid of the
London Pharmacopoeia very 4 hours for
a child of three years and 6 to 8 in
proportions to other children.” (2)
Its efficacy
he thinks is increased by increasing the
frequency of administration than by
increasing the dose. I have tried this
also of in some cases with success, but
I do not value it nearly so highly as

(1) lannt. p. 614. in m. vol. 1. 1879.
Belladonna.

James recommends, ific sulphate gradually increased three times a day; a mixture of ammonium stear (a portion of chloroform) strychnia and hydrochloric acid occasionally as the parotid gland demand, it to have the tonsil well rubbed night and morning with an infustion of two parts of belladonna tincture, two of chloroform and twenty of camphor a bat lintment.

Hydrated chloreal in doses of six grains to a child of three a four. Three times a day is sometimes useful.

Bromide of potash in a little for children, bromide of ammonium is also very useful. I have seen cases in which neither Belladonna nor hydrochloric acid had any effect, considerabla benefited by the exhibition of these drugs in doses.

(1) James. Practice of medicine, p. 211
from face to the brain.
Spirit of chloroform is also in these cases useful.
Sulphate of quinine is also recommended in doses of six to ten grains three times daily.
Carbonate of soda has been recommended.
Retic acid is also praciced by some.
Sebacene is also useful here sometimes.
Either three occasionally as an emetic, or
hi doses of a grain three times a four
times daily.

Hear has also been recommended in dose.
of from one to six grains.
If there is great consterntes at night
it's useful to produce a cinine may be given,
unless there is a tendency to head
symptoms.

What if these applied to the
back of the charging is sometimes of
real service. It should be used of a
Strength seems from fifteen pails to
two barrels to be ounce of water I
applied by means of a funnel.
In some places there is a popular
idea that the juices of a few hours are
beneficial. Whether this is so, I cannot tell,
since I have not tried it.

In these, if severe headache a mustard
balsam should be applied.

These are various external emollients.
According to the oily oil of amber, roche
emulsion, balsam balsam and various others.

The complications must be treated
in the usual way, except that with
regard to bronchitis & pneumonia, great
care must be taken, but to use oleo-pompey
remedies in any form is not, as the
child requires pure stimulant medicines.
Strength is with difficulty regained when
Hoopy, A Queence I have used.
withstood. Process in these cases is the following.

Fr. Bhir. Pecae. ō
Dr. Belladonna 9c 2
Acet. Sulphur. Aurum. ō
Digit. Bellad. ō
Lax. Salicyl. ō
As a ō

To the treatment just seen by now.
In the first stage tonic treatment must be restored. Fumaric acids & calmly that
tonics are then useful with food food.

It's well that please is of great choice in the third stage to check the ketosis,
assert the ketogenic reduces the cough less frequent.

In many cases the cough is not
or cold if for many Vincenti I then the
only remedy is to find it away in
a change of air, high situation being

Usually the dust beneficial with a heavy dry air.