

always hazardous, and often results in inflammatory complications; in summer, on the contrary, the subjects are most comfortable through the day when they are out in the free air. The course of whooping-cough in winter, where children are for many weeks confined to the house the entire day, and at the most are only able to go out for an hour on a warm noonday, is therefore slower, and oftener leaves sequelæ than in summer.

As regards the diet, so long as the process runs a simple, feverless course, no changes need be made, but dry bread and cake, and all kinds of dry irritating nutriments in general, are to be prohibited, because, in their passage over the epiglottis, they infallibly induce a paroxysm. When febrile complications become superadded, an antiphlogistic treatment is called for, and its character is already understood. Milk nutriments, and a plentiful supply of lukewarm milk, exercise a favorable influence in this disease, while the so-highly-recommended althæa and elder-flower teas are totally despised by most children.

Concerning the so-much-lauded change of air, a residence in the country does not by any means possess that abortive influence that is usually attributed to it; still, sometimes it works quite surprisingly when the patients are removed to the country in the last stage of whooping-cough, say, in the fourth or fifth week. The great joy attendant upon the change of place, the altered diet and manner of living, seem to at once arrest all signs of the disease, and from that time the children are not heard to cough.

But, when children who have only just contracted pertussis are sent into the country, no alteration nor abbreviation whatever is to be observed; they infect the children of the village, who may die of lobular pneumonia, and thus bring about most unpleasant consequences.

As regards the paroxysms, all exciting causes are most scrupulously to be avoided. The children should be commanded to eat slowly and quietly, they should not run nor become heated, and are to be spared all mental disturbances so far as it is possible. As the witnessing of a paroxysm will also immediately induce one in a child suffering from whooping-cough, it is therefore advantageous to separate such children whenever it is possible.

In the paroxysm itself the child is easiest with the neck flexed slightly forward, and the hands grasping firmly some stable support. In case the child droops its head too far downward, the forehead should be supported by the hand. Occasionally very severe and prolonged paroxysms may be cut short by introducing the finger far into the mouth, and thereby inducing premature vomiting. *Churchill* advises

that, at the beginning of the attack, half a drachm of ether or chloroform be poured into the hollow of the hand, and held in front of the child's face. I have tried this only once, but the child was decidedly averse to the vapors, and the room smelt so strongly of chloroform the whole day that its occupants were affected with headache, and opposed to its further employment. If, at the end of a paroxysm, slight giddiness and stupor ensue, the children will be obliged to lie down for some time, and the head should be covered with cold compresses.

To enumerate all the remedies that have been resorted to in whooping-cough would consume too much space, and be of little benefit, for it is now a conceded fact that remedies, which were found to be of decided value in some epidemics, proved totally worthless in others.

The treatment by emetics has been, and still is, most incomprehensibly, much in favor. Emetics were given every day, or, at least, every other day, for one or two weeks, and it was believed that an abbreviation and mitigation of the attacks were effected. To young children the French physicians give their syr. ipecac., to the older ones vin. stibiat. The fact that those who extol these therapeutic experiments are now very materially reduced in numbers, would, of itself, dissuade me from repeating them. And, besides, to induce vomiting artificially in a disease which is attended by recurring acts of vomiting is, as it seems to me, to say the least, entirely superfluous.

Of the narcotics, *belladonna* came in use by preference, and of this remedy, in particular, has it oftenest and most strikingly been observed, that its effectiveness is decidedly different in different epidemics. Thus, *J. Frank*, for example, in one epidemic, derived beneficial effects from it, in six others none whatever. I myself can only find fault with belladonna for the inequality of its preparations, on account of which it is necessary to exercise the utmost possible caution in increasing the dose. As soon as dilatation of the pupils and irritation of the throat ensue, the paroxysms, it is true, become decidedly ameliorated; but these symptoms of poisoning are also of themselves unpleasant. They frighten the parents, and in some children, even when the use of the remedy has been suspended, complete blindness, giddiness, and critical delirium, appear.

So long as the pupils remained undilated, I have never yet been able to detect any mitigation in the paroxysms. The medium dose is *rad. belladonna* gr. $\frac{1}{2}$ twice daily, in the form of a powder. As many children do not readily take powders, it is best to employ a mixture of *ext. belladonna*, gr. ij—iv, dissolved in ζ ss of *bitter-almond water*, of which twenty drops may be given two or three times daily. The reproach of uncertainty of action, supposed to

depend upon the manner of preserving belladonna, is even more applicable to the extract than to the powder. In its entire course whooping-cough cannot be cut short by belladonna, and a mitigation of the individual paroxysms can only be accomplished through a poisoning, at the risk of unpleasant consecutive effects.

Opium has been repeatedly recommended. And what was said of belladonna is also applicable to this remedy, only in a still greater measure. When given for some time it produces constipation, difficult to be overcome, and cerebral congestion. Still, at the climax of the disease, when the child has already passed several sleepless nights and is extremely excitable, it is a very valuable remedy. One to five drops of laudanum, according to the age of the child, to be sure, produce several hours of sleep, after which, however, the paroxysms recommence with their former severity.

Some physicians, in addition, extol *ext. conii*, *hyoscyami*, *lactuce virosæ*, *pulsatillæ*, *nicotianæ* and *aq. amygdal. amar.*, which are rejected by others. In those whooping-cough epidemics which I have so far had an opportunity to witness, I have repeatedly observed that the continued use of narcotics for several days, in the early part of the disease, only caused harm, while, at its climax, a single or repeated narcotism, with opium or belladonna, exercised a favorable influence upon the exhausted and yet excitable children.

The opposers of these narcotics recommend the *metallic antispasmodics*. Their extollers very naively say that, with them, a rapid mitigation of the violent cough is less surely effected than a gradual extinction of the convulsive character is achieved, and then only is a cure effected; or, in other words, whooping-cough cannot be hindered much in its regular course by these remedies. Of this class the most preferred remedy is *zinci oxidat.* ℞ss—℞j, pro die; next, *carbonate of iron*, ℞j—℞ij pro die; *acetate of lead*, *nitrate of bismuth*, *sulphate of copper*, and, lastly, *nitrate of silver*.

The most frequently employed *vegetable* and *animal nervines* are *moschus*, *castoreum*, *assafoetida*, *succinate of ammonia*, and lastly *coffee*.

Tonic and astringent remedies are of decided benefit in the last stage of pertussis, and here the powdered cinchona bark is superior to all the rest. In this stage I give to very many feeble children as much of the powder as can be taken upon the point of a common table-knife two or three times daily, without any admixture whatever, and find that they take it without much objection, and for that reason employ it in preference to the decoction, and the altogether too-bitter quinine. Also tannin, by itself, or in equal parts with the flowers of

benzoin, given as high as five grains a day, is much praised by some physicians. The equally-bad taste, and especially the constipating effects that invariably result from its repeated employment, are the great objections to it.

Cochineal, a purely empirical remedy, is tolerably extensively used by English practitioners, who, according to perfectly reliable reports, claim to have produced some very remarkable effects by it in some epidemics. On account of its being easily decomposed, it is best to give it in powder mixed with a little sugar, two to six grains pro die. My experiments, performed with it in two epidemics, furnished entirely negative results, and, owing also to the article being somewhat expensive, I have now abandoned it altogether. During the last two years, I have made somewhat extensive use of a remedy that has fallen into much disrepute, namely, calomel. I give it daily to all whooping-cough patients, under one year of age, in doses of one-eighth of a grain for two or three weeks, until the severity of the paroxysms diminishes. Since that time I have observed a far less number of cases of lobular pneumonia, which previously carried off a considerable number of the infants. Consecutive effects, whether immediately or later, do not ensue from this treatment.

The rest of the empirical internal remedies to be mentioned are, *sulphur*, *lobelia inflata*, *viscum quercinum*, *muriatic acid*; and, lastly, *arsenic*, *phosphorus*, and *tr. cantharidis*.

The endermic treatment with *ung. tartar. stibiat.* is now completely abandoned, as cruel and ineffectual. *Lachmann's* method, on the contrary, seems to deserve a further trial. He claims that, in the first stage, whooping-cough may abort by vaccination, and, in already-vaccinated children, strews the powder of a vaccine crust upon a blistered surface, where it is confined for several days by adhesive plaster. It is asserted that blisters treated in this manner cause severe pain, and occasionally even become gangrenous. He also administers the powder internally, a vaccine crust being rubbed up with sugar of milk, and repeats this dose after four days, by which treatment equally rapid cures are claimed to have been achieved.

Lastly, there remains yet to be mentioned, *Watson's* repeated and laborious cauterizations of the mucous membrane of the fauces and larynx with a solution of nitrate of silver, by which it is claimed that the affection is subdued in from eight to ten days. With us, they have not proved themselves of such decided efficiency as to have obtained general recognition.

BIBLIOTHECA
MUSEI HIST. NAT.

If now, as a *résumé*, I were to give an explanation of my views, it would go to show that there never has been, and most probably never will be, a remedy by which whooping-cough may be abridged, any more than we are able to cut short the acute exanthemata, or typhus fever, or pneumonia. Hence, an expectant treatment is to be continued as long as possible; the violent paroxysms should be palliated by narcotics; lobular pneumonia in infants we must try to prevent by small doses of calomel; feeble children are to be treated with tonics, and, as a general rule, all the patients should be kept under the most favorable hygienic conditions possible.

(12.) PERIODIC NOCTURNAL COUGH.—Periodic night-cough is an extremely rare and peculiar disease. It is observed in perfectly healthy children, but oftener in those with hereditary tuberculosis, and usually attacks children from two to ten years of age.

Throughout the entire day, the child does not cough, sleeps tranquilly in the evening, and, as a rule, wakes up only after midnight, crying violently, and coughing. Generally, the cough is continuous and dry, not so paroxysmal as to give rise to dyspnoea as in whooping-cough, but severe enough to prevent sleep for two or three hours every night. It is not accompanied by expectoration, and the character of the cough is best compared with that of an hysterical girl, who sometimes suffers from paroxysms of a purely spasmodic cough. This cough recurs every night, not precisely at, but about the same hour, every paroxysm lasting an equally long period, until finally the child, entirely exhausted, and breathing rapidly, falls asleep, to wake no more till morning. Thus it goes on for weeks, and even months, the attacks finally becoming shorter and feebler, and ultimately ceasing entirely. The eruption of a tooth of the first or second dentition often forms the final act of this enigmatical disease. I have met with it but three times; one child, both previously and subsequently to the attack, was perfectly well, but the other two were the progeny of tuberculous parents, and subsequently exhibited very distinctly the signs of progressive tuberculosis. Although the cough in the daytime ceases completely, and no sibilant râles whatever can be heard over the entire thorax, nevertheless, during the whole day, the children are gloomy, morose, and become anæmic. They have not a proper appetite, and mostly suffer from cold feet.

Treatment.—The distinct intermissions which mark the course of the disease seem to indicate a treatment with quinine. But, notwithstanding this circumstance, this remedy has proved itself totally useless, the cough in most instances recurring, even when large doses,

from four to six grains, are administered at a time. Small doses of narcotics are quite as unsatisfactory. Opium and morphine, given to produce profound narcotism, do indeed bring about an arrest of the malady for one night, but the attending bad effects of large doses—loss of appetite, headache, and obstinate constipation—are so unpleasant, that I have always been compelled to desist from a continuous administration of these remedies, before obtaining any permanent result. The inefficacy of quinine and morphine proclaims with tolerable emphasis that a material alteration—to be sought for, perhaps, in a swelling or tuberculosis of the bronchial glands—must be at the bottom of this disease. It is best to limit the treatment to a good diet and tonics, fresh air, and uniform temperature, with which, according to the experience so far acquired, the malady has always, although after a very long time, terminated favorably.

F.—PLEURA.

(1.) PLEURISY (*Pleuritis*).—Pleurisy may even attack children *in utero*, who then as a rule perish, or survive the delivery but a short time. In the new-born child, phlebitis umbilicalis is a frequent cause of purulent absorption, and thus also of secondary pleurisy.

Empyema occurs so rarely in early infancy that the most experienced Pædiatricars have only been able to report a few solitary instances. On the other hand, general pleuritic adhesions are often found in young children, who, during life, suffered from pulmonary affections, particularly from phthisis pulmonalis. In older children empyema occurs not infrequently, becomes, when no complications are present, tolerably quickly absorbed, and leaves behind it no remarkable deformity of the thorax. Altogether, pleurisy in the first age of childhood may be regarded as an extraordinarily rare affection, and as a tolerably infrequent one after the beginning of the second dentition.

Pathological Anatomy.—According to *F. Weber*, of Kiel, to whom we are indebted for most of our knowledge concerning this condition, the profuse transudation of bloody serum into the large serous sacs, and consequently also into the pleural cavities, is to be accurately distinguished from the genuine pleurisy of still-born children. No flakes of fibrin are ever found in that simple cadaveric transudation, nor has the mother during her pregnancy experienced any symptoms referable to that condition. In these still-born children, *Weber* assumes a *purely inflammatory* and a *dyscrasic pleuritis*.

In *purely inflammatory pleurisy* of children before birth, the cor-

BIBLIOTHECA
MUSEI HISTORICO-NATURALIS
MAGNIFICENTIAE