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TREATMENT OF THE COLD STAGE.

A Paper read before the Shelby Co., O., Medical Society, on June 7th, 1877.

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Cholera infantum has been observed from the earliest ages, and appears during the hot season in every country on earth.* It is, therefore, a disease of great antiquity and of universal distribution. Although true that every part of the habitable globe is periodically visited by this Nemesis of early childhood, observation shows that the great centres of population of all lands are especially afflicted.

Not a little confusion has arisen in regard to the proper limitation of the term cholera infantum. Summer complaint, a name of popu-

^{*}Trousseau; Clinical Lectures. Phila. Ed. 1873. Vol. II, p. 454.

lar origin, and cholera infantum, have come to have a synonymous signification within and without the profession. This is much to be regretted, as it tends directly toward causing confusion and inaccuracy. The expression, "cholera infantum", should be applied to to such cases only as present a striking, well-known and nevervarying array of symptoms, bearing a close resemblance to, or being identical with, the sporadic cholera morbus of adults; reserving the more popular name, "summer complaint", for those other gastro-intestinal disorders of children occurring in summer, which pursue a more or less chronic course, and which are not easily made to assume their proper place in the nosological scale. The impropriety of allowing a single name to describe diseased conditions so varying in character as veritable cholera infantum, dysentery, entrocolitis, etc., is so apparent, that the point does not require to be enlarged upon. In this paper I shall consider the former malady only. I will preface my observations on the treatment of this disease by the statement of a series of propositions, the truth of which, singly considered, is acknowledged by leading writers:

- 1st. Cholera infantum and cholera morbus are identical and the post mortem appearances are the same in both.*
 - 2d. Cholera infantum is of great fatality.
- 3d. Cholera infantum is a self-limited disease, with a duration of not more than three days.†
- 4th. If the patient can survive until reaction takes place, he will generally recover.
- 5th. The indications for treatment are, to bring about reaction, restore the lost tissues and maintain the powers of life.

Symptoms.—A well-nourished, active, rosy-cheeked child is taken

^{*}Flint: Practice of Medicine, 3d ed. 1868, p. 465. See also Leube in Ziemssen's Cyclopedia. Vol. VII.

[†] Edward Waldo Emerson, M. D., Boston Medical and Surgical Journal, July 27th, 1876. Flint, vol. cit. p. 465, states that when death occurs, it does so in one, two, or three days.

Trousseau, vol. cit., p. 457, says that if the cold stage continues for more than 24 or 26 hours death is almost inevitable. Dr. W. Walling, Am. Prac., Vol. II. p. 279, found the average duration of 33 cases ending in recovery, to be 15 hours, and the greatest duration was three days.

suddenly, generally at night, with profuse and active purging and vomiting, the discharges consisting at first of the contents of the alimentary canal and afterwards of clear or lightly colored liquid. The skin becomes cold, pallid, and looses its tonicity; beginning in the extremities, but rapidly extending to the trunk and head, which latter is at first extremely warm. The pulse is very rapid and can scarcely be felt at the wrist. Great and burning thirst is manifested in every case. The expression is pinched and the child has a look of age far beyond its years. The voice, as in sporadic and epidemic cholera morbus, is changed in tone and altered in pitch. After a while the vomiting becomes ameliorated, or altogether ceases; the stools also are less frequent and have assumed a greenish hue. The child is already greatly wasted; is pale, pulseless and cyanotic. With the fontanelles sunken, the abdomen relaxed, the urine suppressed, and the eyes half-closed and turned upward, the little sufferer lies drowsy, fretful, rolling its head from side to side; a picture of human misery, heartrending in the extreme, and one that must ever appeal to the humane physician to bend every energy to save and alleviate. Convulsions and coma often occur and are the direct cause of death in the great majority of fatal cases. If, however, the system rallies from the shock and reaction takes place, the patient usually recovers, and as there are no lesions involved which are of necessity fatal, convalescence is generally short and uneventful.

Treatment.—We can assert, without fear of successful contradiction, that of all diseases known to science this one is treated, by a large majority of practitioners, with a presumptious empiricism that finds its parallel only in the practice of a past age. The treatment now to be recommended, I offer, not for occasionally occurring, exceptional cases, but to be followed in every case of true cholera infantum as routine treatment.

The first indication is, undoubtedly, to attempt bringing about reaction, and to effect this object I know of no agent so sure and prompt as the mustard pack.* A cloth, sufficiently large to envelop the child from the feet to the chin, is saturated with highly sinapized warm water and wrapped suddenly around the child, the whole being covered by a thick and warm blanket. After the lapse of half an hour, more or less, the change in the appearance of the child, in case the treatment is to be successful, will be remarkable. Color and warmth will have returned to the surface; the tissues will have lost their pinched and old look, a natural perspiration will have appeared, the vomiting will have ceased and the alvine discharges will have become less frequent. The child is now to be taken from the pack and kept closely enveloped in a warm blanket.

Meanwhile the second indication, supplying the waste of tissues, is to be promptly met. It has been shown, again and again, that only the watery and saline constituents of the blood are lost; therefore to meet this indication absolutely nothing, save water in which a few grains of common table salt have been dissolved, is required. Here is my formula:

Water, one pint. Chloride of sodium, 10 grains.

This is to be given, ice-cold, as freely as called for; true it is that many times it will be soon rejected by the stomach, yet in any case more or less is necessarially absorbed, hesides it tends directly to prevent further transudation of liquid. In extreme cases, intravenous injection of water at the temperature of the body (about 100°) should be tried.

Rapidly diffusible stimulants, such as ether and ammonia, are indicated on general principles, and are to be given as required. I wish to raise my voice in emphatic protest against the too common, pernicious practice of drugging little patients suffering with cholera infantum. The least familiarity with the principles of physi-

^{\$\}psi\ \text{Lindsey}\$, Med. Gaz, 1832, Vol. IX, pp. 519—523, recommended mustard poultices in the treatment of the choleraic state, and since his day various modifications of this plan have been recommended by various authors.

Trousseau, vol. cit. p. 457, lauds the mustard bath.

E. W. Emerson, vol. cit. p. 98, advecates the pack, pure and simple.

ology and pathology would certainly enable any one to know that almost all the medicines generally used in the treatment of this affection require to be digested before they can be assimilated, and that in the algid stage of cholera infantum such digestion is totally impossible. Food, also, for the same reason should be interdicted during the continuance of this stage.

With the establishment of reaction, however, judicious dieting and proper medication may be made to accomplish marvelous results; but this leads us into a stage of the disease that is beyond the limits and scope of the present paper, and with which we do not intend to cope on this occasion.

In conclusion let me again call attention to the fact that I am not now treating of the summer diarrheas of children, but of another, entirely different affection, vastly more formidable, and one which Leube declares can not be distinguished from the cholera nostras of the adult.

