

Epidemic Diarrhoea.

*A Lecture Delivered at the Infants' Hospital,
Vincent Square, S.W.*

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(Concluded from page 225).

The sterilisation of milk very often results in one of the worst forms of the disease. It has been noticed by competent observers that some of the babies who have died most quickly and who have shown the least resistance to the disease, are babies who have been fed for a considerable period on sterilised milk. The reason is a very obvious one. As the result of the babies living for a continuous period on sterilised milk, their digestive functions become very largely perverted. The vital activities characteristic of the whole alimentary tract are largely absent because the processes which go on when pure, unheated milk has been given, are impossible with a fluid so changed in its character as is milk when it is sterilised. Very frequently, therefore, the infant develops specific liability to the disease by reason of the pathological fermentations going on in the intestines. The baby becomes exactly like a culture tube, and when it is inoculated with the poison, the whole of the material is simply so much food for the bacteria to live upon, and thus poison the infant.

Now let me, before discussing the signs and treatment of the disease, draw your attention to the most important thing in regard to the disease. It lies, as so much of our work lies, in the prevention of the disease. Remember it is not a sudden disease, it is nearly always preceded by a period of gastric and intestinal disorder. That, therefore, is the time when we should be on the watch, and particularly when the hot season is approaching should we give all possible attention to any indications of gastric or intestinal disorder. Especially should you watch the flabby baby I have before alluded to in these lectures, with pasty, ill-digested, clay-like motions. That is the typical baby to contract the disease in its worst and most fatal form. Such a baby seized with the disease, becomes so ill in the course of 24 hours, that its recovery is practically out of the question. It has been ill for a long time, it has been flabby and weak, with the symptoms that I have described, and when zymotic enteritis arises, it yields without giving any serious resistance. Therefore our great business is to secure for the infant, as far as we can, firstly that it should be breast fed, if possible, and if that is not available, that

our methods of feeding should be with the purest milk obtainable. If the milk is not safe, we should Pasteurise it at 150 degs. Fahr. for 15 minutes. This process, while injuring the milk in some degree, does not do anything like the injury that boiling does, and at 150 degs. Fahr. all disease producing organisms are destroyed. Dealing with the babies of the poor, if you can arrange that the milk is raised to 150 degs. Fahr. for 15 minutes, you are securing it from all bacteria that are disease producing, and that milk will keep with care for 48 hours or longer. The milk heated to 150 degs. gives the reaction which raw milk gives, and which milk heated above 160 degs. does not give. Therefore, if you keep to 150 degs. Fahr. you will avoid most of the serious injuries done to milk by boiling it.

THE SIGNS OF THE DISEASE.

The signs of the disease may now receive our consideration. In mild cases the onset is gradual, being accompanied by fever of a moderate degree. Gastric disturbance is not a marked feature. Diarrhoea develops gradually, the motions become more frequent, their colour changes from yellow to green, becoming watery, acid, and offensive, and containing masses of undigested food. The infant is pallid, very weak, and apathetic, and moans, the weight rapidly decreases. These cases are the most hopeful when treated with the necessary care and attention. The acute cases present somewhat different features. The infant, apparently well, suddenly becomes ill. The skin is hot, the temperature rises rapidly, and the infant shows all the signs of severe distress, draws up its legs, moves restlessly, continually writhes with pain, and sleep is almost entirely absent. Vomiting is generally the first sign, and may be extremely severe: at first the infant vomits food, and then retching of a continuous character sets in. No food can be retained by the stomach, very often the food is entirely vomited. Diarrhoea ensues in the course of 12 hours from the initial illness. The motions are of the character previously referred to, except that the diarrhoea is much more marked. The intestines constantly acting, the discharge becomes fluid, almost colourless, and sometimes very offensive; the amount of fluid lost may be very large, and the infant visibly shrinks from the loss of fluid from its tissues. In the worst cases the signs are characteristic. The pulse is weak and rapid, the crying so prominent in the earlier part of the attack, ceases, and is replaced by feeble moaning. The cheeks sink inward, and we see a space between the lids and the eyes which remain open during sleep, owing to the loss of tonic muscular contrac-

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