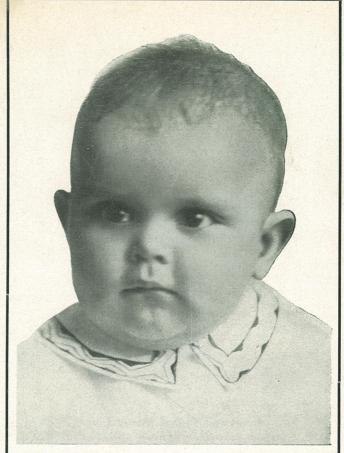
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Whooping Cough

LUDVIG HEKTOEN ${}_{AND}$ BEATRICE R. LOVETT

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F ALL contagious diseases, this one is the most likely to affect the youngest members of the family; and herein, as we shall see later, lies its chief danger. Even the tiny baby is not immune; for many cases occur in infants of six months or less, while the largest proportion occurs between the ages of one and three years.

Adults are usually protected by a childhood attack or fail to come in sufficiently close contact with those harboring the germ to catch it from them. Occasionally, however, a mother is infected by her sick child, and cases have even been known to occur among the aged.

The germ in question has been recognized and some of its habits learned so that much can be done to prevent its spread from child to child. It is present in the secretions from the nose and mouth, and is spread in the usual manner of such germs by sneezing, coughing and kissing. The germ is present in large numbers during the early stage of the illness, before the "whoop" is well developed, so that the most infectious period occurs, as so often happens, at a time when the nature of the disease is difficult to recognize.

Therefore, the careful mother will keep her children away from those having severe coughs and colds and, in kindness to her neighbors, will keep her own children at home when they are suffering from these conditions. Especially will she be careful of the baby, and let no coughing, sneezing youngsters bend over the side of his crib, for the drops of moisture spread from the nose and mouth in this way may carry the germs of whooping cough as well as of many another disease. On the other hand, the germ fortunately does not live long outside the body, and so is not likely to be spread by books, toys and utensils unless they have come directly from an infected person.

Following infection, that is, the lodging of the germs in the lining membrane of the nose and throat, the germs increase and multiply for a period of a few days to two weeks before the symptoms begin. Then the small victim begins to cough, the nose runs, the eyes frequently water, and he may feel somewhat feverish.

These are the warning signals, and now is the time to keep him away from his comrades. The cough becomes more persistent, increases in frequency, and shows a tendency to occur in regular "spells." This catarrhal stage lasts one or two weeks and is frequently thought to be nothing more serious than a common cold. However, if the cough becomes worse instead of better, if the child has coughing spells at night, especially if he vomits afterward, the suspicions may be aroused, and one may be prepared for the "whoop" so characteristic of the illness.

The first paroxysm usually occurs during the night. The child gives a series of explosive coughs, without time to draw breath between, and ends with a loud whooping or gasping sound, as the air is at last drawn in forcibly through the half closed passages. The face often becomes deeply red from the effort, or even bluish from lack of air, but eventually the spasm relaxes and the child breathes again. This performance may be followed by vomiting, by expectoration of thick mucus, or often by nosebleed.

The mother should be able to recognize the typical paroxysm of whooping cough, for the doctor is often not present at the critical time, and the diagnosis must rest largely on her description. The spells occur several or many times daily. The general condition of the older child may be but little affected by them; between times he plays, eats and sleeps as usual; but the young baby is easily exhausted, especially when, to the actual exertion, is added the terror of one of the most painful feelings—inability to get one's breath.

Patient Needs Plenty of Fresh Air

This coughing stage lasts for several weeks, during which time the child is usually up and playing about, and may profitably be out of doors if the weather is warm and dry and if proper isolation can be maintained. Fresh air is useful in preventing later complications, and along with rest and sufficient food, protection from cold and wet, and a daily bath, it forms in most cases the essentials of treatment.

There may be some difficulty in keeping up the nutrition, as small children especially often vomit after the spells, or refuse food for fear of bringing them on. Sometimes it is a good plan to feed the child immediately after recovery from a paroxysm, since it will probably be some time before another one occurs. This, however, is seldom necessary, and an ordinary light diet, free from foods that are likely to irritate the throat, can be given at the usual hours.

Ordinarily, within a few weeks from their beginning, the paroxysms decrease in number and severity, and a complete recovery is gradually made. Frequently the peculiar characteristic of the cough persists for some time afterward, or reappears when the child takes an ordinary cold. Occasionally another member of the family may stage a good imitation of the "whoop"—unconsciously, or for the supposed benefits to be derived thereby. Second true attacks of the illness are very rare.

Although most children recover from whooping cough uneventfully, there are certain conditions that make them susceptible to compli-The previous health and state of nutrition of the patient are important in this connection. Weak, malnourished, and rickety children are more likely to develop bronchopneumonia and are more likely to succumb to this serious complication than are sturdier chil-This complication is especially frequent in those under 2 or 3 years of age, and this is the chief reason for preventing infection at least until the child is able to withstand the attack without difficulty. In fact, whooping cough is a more serious illness than is commonly thought when it occurs in young, weakly children, especially during the cold months of the year when respiratory infections are prevalent.

Preventing Spread of Disease

The prevention of whooping cough consists in proper isolation of the patient; the usual period being six weeks from the first paroxysm, or until all coughing stops. He should be prevented from coming in contact with others; all discharges from the nose and mouth should be collected and burned or disinfected, and separate dishes and utensils should be used. During an epidemic it is wise to isolate all children having the symptoms of a common cold since, as has been said, the early period is the most infectious.

Work is now being done on the preparation of vaccines against whooping cough, and it is hoped that some means of protection may be discovered, particularly for children under 3 years of age, those with rickets, or in poor condition.

At present the chief means of checking epidemics lies in the early recognition and isolation of those infected. So parents should endeavor to keep their children's whooping cough at home and refrain from sharing it with others, since whooping cough may prove serious or even fatal for the baby next door, and sometimes for an older child.

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