

every case during the first week or ten days; thence they are discharged through the kidneys, and in the vast majority of patients, the urine from the middle of the second week onwards for a variable period contains the bacillus typhosus. They are also found in the spleen and in certain portions of lymphatic tissue in the intestine which are known as Peyers' patches. In the latter situation they cause death of the tissue, and ultimately the dead portion is cast off leaving an ulcer.

So we have in enteric fever two facts to keep before our minds; one is that the bacilli with which the circulating blood is swarming are producing poisons, or toxins as they are called, and that the patient is therefore suffering from a general disease, which goes on whatever we may do to the intestine, and another is that the presence of weak spots in the bowel itself is a source of danger. Formerly we did not know that the organisms got into the blood from the first, and so we concentrated our attention somewhat too closely on the ulcerated intestine.

The incubation period of enteric fever is usually 12 or 14 days, and though we have as yet no definite evidence on this point, the probability is that during this time the bacilli are growing in the blood to a certain extent; most people feel ill during this incubation period.

The onset of the disease proper is not well marked as a rule, but the patient has a headache, which continues steadily—though the pain is not, as a rule, very acute—instead of passing off as most headaches do; he also becomes more and more tired, and feels heavy, stupid, and ill.

As a rule the patient now thinks that he has a bilious attack, and takes an aperient, which gives him abdominal pain and diarrhoea, or rather, instead of his bowels being opened once or twice only, they continue to act for a few days. In severe attacks there is sometimes diarrhoea apart from any aperient, but as a rule the onset of enteric fever is not marked either by abdominal pain or undue looseness of the bowels when no purgative has been administered or taken; this, as will be seen later, is rather an important point.

At the onset the temperature is raised, and it advances by two degrees at night and falls by one degree in the morning until a pyrexia of 103 or 104 degrees is reached, when it remains with but slight variations for a fortnight or so; the temperature then begins to drop to the normal, or nearly so, in the mornings, the evening readings being gradually lower until the normal line is reached altogether, at about the end of the third week; both shorter and longer periods are, however, quite common.

With the headache and the pyrexia there is prostration, which may be extreme, so that the patient lies almost unconscious of his surroundings, and there is almost always some delirium at nights. He becomes steadily thinner.

Now these are simply the signs of toxæmia, and in many cases there is nothing, or very little, to show where the manufactory of the toxin is; before the discovery of the bacilli in the blood we assumed that they were formed in the intestinal ulcers, but against this is the fact that if we examine the body of a person who has died of enteric we find very many more bacilli at the beginning of the intestine than lower down, where the ulcers are; also the degree of poisoning observed at the bedside does not correspond to the amount of ulceration found post mortem.

But in many cases the ulceration does give rise to signs and symptoms, and of these the most important is distension of the abdomen, which, when it is well marked, is known as meteorism; sometimes abdominal pain and diarrhoea are due to ulceration, but, as will be seen later, this is not the most common cause of either. Sometimes the ulcers are deeper than usual, and one of them may penetrate the submucous layer of the intestine and open up a blood vessel, so that we get hemorrhage from the bowel, or it may go deeper still and make a hole right through all the coats, so that the contents of the intestine escape into the abdominal cavity; this is known as perforation: the signs of both these complications will be described in a future article.

To sum up, enteric fever is a general infection of the blood with the B. Typhosus, which also irritates the intestine, so that ulceration results. Keeping this before our minds, we will next consider how the disease may best be treated, and then discuss the signs which should indicate to the nurse that all is not well with the patient.

The Irish Nurses' Association.

On December 6th Dr. Douglas Good gave the members of the Irish Nurses' Association a most interesting lecture on "Massage and Its Use in Common Ailments." After telling the origin of massage and how it was practised in the far-away ages, Dr. Good described the kind of nurse who should take up massage, and also the proper conditions for her to live under, so that she might keep herself in good health. He also gave some valuable information with regard to breathing movements in order to relax muscles. Miss Shuter presided and there was a large attendance.

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