

## A Short Series of Lectures to Ward Sisters.

### LECTURE 5.—ENTERIC FEVER.

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I propose in this lecture to show you as far as possible how the general principles that I enunciated at the beginning as underlying the treatment of infection in general may be applied to the management of a case of enteric fever.

Enteric fever, as you know, is a toxæmia; the symptoms that you see in the wards—the headache, the wakeful lassitude, the prostration, and so on—are due to the poisoning of the system by the products of the bacillus of enteric fever, and possibly of some other organisms also.

The manufactory of the poison is situated, as a matter of fact, in the lymphatic system of the abdomen, notably in the glands in the wall of the small intestine and in the spleen. There are certain signs such as abdominal distension, hæmorrhage from, and perforation of, the bowel, which show us that the disease is an abdominal one, but they are not always present. In many cases of enteric fever there is nothing to show where the manufactory of the toxin is situated—we have to deal with the toxin and not with the manufactory.

About the prevention of enteric fever, I will at present say nothing, except to remind you that you run a great risk of contracting the disease yourselves when you are nursing patients afflicted with it, and that such risk can be greatly minimised by taking proper precautions. In the vast majority of cases, nurses contract the disease by eating food with contaminated hands. The hands, it is true, may have been carefully washed before partaking of a meal, but I must remind you that something more than the ordinary domestic hand-washing is required: there must be complete surgical sterility of the hands, and I need hardly tell you how difficult this is to attain. In Monsall, as you know, rubber gloves are provided in order to prevent the contamination of the hands, and you, as sisters, have a serious responsibility in seeing that the younger nurses protect their hands in the manner provided. Apart from this, however, the nurse who comes straight out of an enteric fever ward, sits down to a meal, and commences eating bread with her fingers, is rather tempting Providence. It is possible to contract enteric fever by direct personal infection from the patient, by inhal-

ing the breath, for instance, but this is certainly not the most common method of infection in hospital. The precautions to be adopted by the nurses are placarded in detail in the enteric fever wards, and I need not here dwell on them further.

Assuming now that the patient is actually suffering from enteric fever, let us see how we can apply our general principles for his benefit.

Can we, in the first place, take the germs away by any process of cleansing? Obviously, we cannot, as they are situated not on the surface, but in the substance of the walls of the intestine, and also in the spleen and other glands. The intestine is not a drainpipe with impervious walls that can be flushed with an antiseptic, as some would perhaps have us believe, but the walls are as porous as a sponge, in fact, their main function in health is to absorb the contents of the intestine. The germs are not then accessible to any process of flushing or washing out of the bowel.

Can we kill them by disinfectants—by drugs, that is, taken internally? Here it is obvious that any disinfectant in order to reach the germs would have to be circulating in the blood. In practice, it is not possible to administer any drug which is capable of entering the blood stream, and is then strong enough to kill the germs in the various organs, without damaging the blood corpuscles also. In the treatment of certain symptoms it is occasionally of advantage to administer antiseptics by the mouth, but it has yet to be shown that any of them are capable of cutting short an attack of enteric fever. It is, at the best, only possible by the administration of drugs to wash the surface of the typhoid ulcers. Whether this is of advantage is a debatable point.

Can we neutralise the toxins that are circulating? In other words, have we an antitoxin for the disease? Here we are met by the fact that it is only with great difficulty that we can communicate typhoid fever to an animal, and then only in a mild form. We can make, it is true, a bactericidal serum by simply giving the animal doses of the typhoid germ, but for some reason or other this does not appear to be of any value clinically. Also, the disease runs too short a course for help to be gained by raising the opsonic index of the patient.

In practice we cannot treat enteric fever by any system of direct attack.

We are driven then to our last resource: to keep up the patient's strength as best we can, and to treat symptoms as they arise. But we can, at all events, attempt to refrain from making him worse.

Let us take the latter point first: we

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