

on this point. This routine is really far less cumbrous than it sounds and with the loyal co-operation of house surgeons, sisters, and dressers runs smoothly enough as far as we are concerned.

A Short Series of Lectures to Ward Sisters.

LECTURE 6.—DIPHTHERIA (1).

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I do not propose to say very much about the general treatment of this disease. It is important to remember that it is a toxæmia, and that the toxin or poison produced by the diphtheria bacillus has from the first a markedly depressing effect on the circulation. It happens that the manufactory of this poison is in the throat, but in the ordinary forms of diphtheria, where the tonsils only, or the tonsils and palate combined, are affected, we have only to think of the poison and its effect on the circulation.

It is true that from the appearance, or rather the size, of the factory we can get a rough idea of the amount of poison that that factory is going to turn out, but we cannot affect that poison by any method of treatment applied directly to the throat. This is a very important point, and the reason for it is that the bacilli that are producing the poison are not situated on the surface of the membrane covering the affected part: there are bacilli there, it is true, but they are not the ones that are manufacturing the poison. Consequently the poison-producing area is protected by the layer of membrane with which you are all familiar in cases of diphtheria.

It is true that we might strip off this membrane, but there are two objections to this; firstly, that the process is distinctly depressing to the patient, and, secondly, even when we have stripped it off we cannot keep any antiseptic that is strong enough to kill diphtheria bacilli in contact with the raw surface for a sufficiently long time to enable them to do their work.

In practice, active local treatment of the throat in diphtheria is not followed by any diminution in the severity of the symptoms due to poisoning. When diphtheria affects the nose the bacilli are still less accessible.

The effects of the poison are most marked later on in the course of the disease when the membrane has disappeared from the throat. But it is important to remember that they

exist, though they are not so easily discoverable, from the first; even at the onset of the disease this is evident. The child who has diphtheria is not, as a rule, actively uncomfortable, but is languid and inclined to faint—again from the depressing effects of the poison.

Fortunately, we have, in the case of diphtheria, an antitoxin, prepared in the way I have previously described, which is of great value in the treatment of the disease, and what we have to do is to give the patient sufficient antitoxin to neutralise, or rather more than neutralise the amount of poison which we think has been produced and is circulating in the blood. It is necessary to keep the mouth clean, but for this purpose nothing like the same amount of direct treatment is required as in the case of scarlet fever.

There are, however, certain signs seen in the acute stage of the disease which show us that the amount of poison produced, or in the course of production, is considerable. Roughly speaking, this is proportional to the extent of surface that is covered by membrane. Thus, other things being equal, the toxæmia will be more intense when the whole of the interior of the nose is affected than when only the tonsils and palate are covered. Similarly, in a case of faucial diphtheria the outlook is less hopeful when the membrane extends on to the palate than when it is simply confined to one or both tonsils.

Then again, we can learn something from the appearance of the membrane itself; when this is thin, dry, and white, with a well-marked curling up edge, the outlook is better than in those cases where the parts are covered with thick gelatinous-looking deposit that appears to have no definite margin. Bleeding from the throat and nose are also signs of great gravity; so too is a marked odour of the breath.

It is an advantage to the nurse to be able to form an idea of what she has to expect later on when the signs of the poisoning become more marked, but it is above all things necessary to regard diphtheria not as a variety of sore throat, but as a disease of the circulation, and later on of certain nerves. I do not by this mean to say that the nurse has no part in the treatment of a case of faucial diphtheria—far from it; bearing in mind that the disease is a circulatory one, she will have to exert her utmost endeavours to prevent any undue strain on the circulation—in other words, to nurse the patient like a case of enteric fever, only more so.

Then, too, it is essential to bear in mind that the patient's digestive powers are at a very low ebb. I do not think there is any more misleading statement in the whole of the literature

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