

measles himself in due course, whilst his left hand neighbour may go scot free. Why is this?

Obviously it is because in the former the germs have grown and multiplied, whilst they have not been able to do so in the latter case. What then determines whether they multiply or not?

That depends on what we call the resistance of the person attacked. Let us examine what happens in detail. Some germs of diphtheria, we will say, settle on the throat of a child in a tramcar. They find there warmth and moisture, and they start accordingly to multiply. From whatever part is thus attacked a telephonic message is sent to the brain along the sensory nerve, that germs have arrived. The brain then sends messages to the white blood corpuscles or leucocytes, telling them to proceed to the place where the germs are: then the fight begins. If the germs are at once defeated, and are not, therefore, allowed to multiply at all, nothing obvious happens. This is a process which takes place in a healthy man whenever any germs come into any part of his system. But if the organisms succeed sufficiently at first, and are able to kill the few leucocytes that are, so to speak, on police duty, then the soldiers of the body—more leucocytes—have to be called up, and the war is waged in earnest. The host is then said to be suffering from an "attack" of the particular disease—he is ill. If ultimately the germs win, he is said to die; if the germs lose, they are destroyed, and the patient is said to recover.

But to come to details. How is this fight waged? Like other fights, either at close quarters or from a distance. In the fight at close quarters, the leucocyte is in contact with the germ, and literally strangles and then swallows it, or the germ performs this kind office for the leucocyte. This undoubtedly occurs, though not to such an extent as was formerly supposed.

In all probability, just as in modern warfare, the greater part of the fighting is done from a distance, that is to say, it is not necessary for the leucocyte and the germ to be in actual contact. What happens is that the germs multiply, and in doing so manufacture a substance called toxin, which is poisonous to leucocytes.

Similarly, the leucocytes manufacture an antidote to this poison which is called antitoxin. If then the toxin is in excess, the leucocytes are killed; if the antitoxin is the more powerful, the toxin is neutralised, and there is generally some over, so to speak, which may go on and kill the germs.

We have now seen roughly what happens to a patient when he catches any infectious disease. I want you to realise that whatever the germ and whatever the extent of the patient's powers of resistance, the process is essentially the same.

(To be continued.)

Friederike Fliedner.

3. THE MOTHER OF THE INSTITUTION.

(Translated from the German* by Miss L. METTA SAUNDERS.)

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Continuing his narrative Pastor Fliedner wrote:—

"At last came the first patient, on October 16th and the first Deaconess on the 20th, and who, was then happier than our dear mother? Fifty times a day she ran backwards and forwards between the two houses, counselling, taking things in, helping with arranging rooms and beds, speaking a kind word to the patient, directing the probationers, &c., &c., so that jealousy actually arose in our home as though we were forgetting the old in interest for the new. But this was not the case.

"Certainly the Institution for the Deaconesses laid a great burden upon her owing to its quick development. So much more ardently did her zeal increase to nurse and care for her dear Saviour in His poor miserable members. The Deaconess who came first, whom we had appointed the Matron, and who showed great gifts in the nursing of both body and soul, did not, nevertheless, exhibit equally important talents of ruling and administration. My wife, therefore, was obliged to undertake the office of Matron, and the noble-minded Sister accommodated herself in true Christian self-abnegation."

The pastor's wife had often and seriously thought over the duties and responsibilities of this new office, the best way in which to choose, direct, and send out the Sisters, their relationship to each other and to the Committee, and had set down the fruit of her reflections in a neat quarto volume, the main part of which is still regarded as authoritative.

She only brought forward one request:—"Let no man sacrifice the soul to science." It were well if this golden sentence were inscribed over all operation theatres in which feminine hands are called upon to serve the doctor with courage and skill, and still to keep intact the delicacy of a woman's heart.

*The Annual Chronicle of the Kaiserswerth Deaconesses' Institution for 1894.

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