

But this is not always the case. It usually happens that the defence is adequate for a time, at all events, and the leucocytes throng round the bacilli in the wound; and form a barrier which limits the battlefield to the neighbourhood of the wound itself. Then one of two things happens. Either the leucocytes win, in which case we have inflammation of the wound, and generally the formation of pus, which is composed of bacilli and the bodies of the leucocytes which have perished in the fight. The part may be injured by the inflammation so that the wound breaks down, and discharges pus, but this is, after all, simply like the destruction of the country which is unfortunate enough to be the site of the battlefield, *and is of not so much importance as the strength of the opposing armies*. If the barrier is effective, the germs are ultimately all destroyed, and, provided that an exit is afforded for the pus, the wound ultimately heals.

But the barrier may be useful for a time only. The leucocytes of which it is composed may be poisoned by renewed activity on the part of the germs, and so the first line of defence is rendered useless. Still there is another chance; the germs must travel into the system either by the blood stream or by the lymphatic vessels. In the former case they meet with more floating leucocytes, and the fight rages in the blood, but now the patient is much more seriously ill, and will have a high temperature, and it may be rigors and other signs of blood infection. Even then, the leucocytes may triumph and the invader be expelled, but with this difference, that small bands of bacilli will be left in various parts of the body, like troops that have fled to the mountain fastnesses of their country, and multiple abscesses will be formed, which will entail a long and enfeebling illness. This is pyæmia.

But if the microbes travel by the lymphatics, they meet with more leucocytes in the glands adjoining the part, and the fighting is renewed there. Probably the glands will break down into abscesses, but happily the germs are often defeated, and a general septicæmic or pyæmic invasion is prevented.

This, then, in a few words, and quite roughly, is what happens. Either rapid death from acute septicæmia—a word which means blood infection—or a suppurating wound, and nothing more, or glandular abscesses, or again pyæmia or late septicæmia.

Now how can we help? Firstly, we try to take away the invading microbes by washing and dressing the wound, opening up pockets of pus, assisting the patient by such measures as

fomentations, which stimulate the leucocytes and relieve pain. Or we can sometimes kill some of the microbes in a wound by the application of disinfectant solutions, though, unless it is very foul, it is usually best to be content with washing, because all antiseptics damage the tissues more or less. If a disinfectant is required, iodine, or a combination of iodine and carbolic acid, is most commonly employed.

In some cases we can introduce a definite antidote to the microbic poisons, but only very seldom. Still, in tetanus, it is sometimes useful to give tetanus antitoxin, and in the rare case of diphtheria attacking a wound, anti-diphtheritic serum would be most useful.

In all cases, however, we endeavour to help the leucocytes to the formation of antitoxins themselves, by such measures as good food, and sparing the strength of the patient by skilful general nursing. Sometimes stimulants are useful, and very occasionally quinine. Extreme pyrexia is controlled by tepid sponging, but I need not dwell on these well-known matters now.

The point I want to make is that the fight between the leucocytes and the invading microbes is, in the case of wounded from the battlefield, likely to be a severe one, because in the all-important first few hours or days the chances will have been all against the leucocytes. Hunger, thirst, exposure, and the varying emotions connected with the horrors of war have all combined against us, and they have had first innings. The most important factor in the later stage is careful, untiring, intelligent nursing in healthy surroundings, and it is most important to keep the patient quiet and to give him plenty of fresh air. Most cases of wound infection do best under "open-air treatment," and we need not trouble ourselves much about buildings if we can give the man who is wrestling with microbes in his blood and tissues the merest shelter from weather, if it should be inclement, and plenty of good food and nursing.

One other point. All women nowadays are wanting to know how they can look after the wounded, for whom they feel so much sympathy, and many nurses will be helping with classes for instruction in these matters. To them I would say, Do not concentrate too much on First Aid, ambulance work, and so on. The walking stick and triangular bandage business is all very well in times of peace, but what is to my mind of much more importance now is a little knowledge about germs and disease and the dressing of wounds, not omitting such measures as invalid feeding and

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