

as he is bound to do when his throat is sore, or when it is being cleansed, he pours out organisms into the air, and on to the bed-clothes, and the hands and clothing of the nurse. Whenever he eats, drinks, or excretes, he infects the utensils employed for those purposes. He is not merely a wound; we cannot cover him up, or disinfect him. And yet, in which case is the greatest attention usually paid to asepsis? Without doubt, in the surgical patient. The other is "medical," and this is often (though, of course, it should not be) synonymous with the relegation of "asepsis" to the next ward, where the nurses see knives, and so remember that there are such things as germs!

The fact that these surroundings of the scarlatinal patients actually do become infected can be shown quite easily by taking cultures from clothing, dust, hands, and so on, and finding in them the same organisms as are in the throat of the patient; and, at Monsall, this demonstration forms part of the usual course of lectures to second year nurses. Knowing this, it follows that infective matter may be conveyed from these to any other patients.

In order to see exactly how this happens, and what we can do to prevent it, we will take the different surroundings in detail. They are (1) the air, (2) the patient's clothing, (3) the hands and clothing of the nurse, (4) the utensils. In thinking of all of these we must bear in mind that while any one patient (with scarlet fever) may be infectious to any other, there are two kinds of illnesses to be considered—those that are unduly mild (and in whom there may even be some doubt as to the diagnosis), and those that are very severe. The milder cases have to be protected mainly from the other patients in the ward, and, in the latter class, the others have chiefly to be protected from them.

We will take the air first. It used to be thought at one time that the infection of scarlet fever travelled a long way through the air of the ward, and even to another ward in the grounds, by what is known as aerial convection, and that this was in fact the main, if not the only, way in which infection was transmitted. Now, it is obvious that if this were so, those nearest the particular patient would suffer the more frequently, for the nearer they were, the more concentrated the infection would be. We have an example of this in the case of small-pox, which is, under certain circumstances, disseminated by aerial convection. Here there are numerous instances of the disease having radiated, as it

were, from the small-pox hospital, and what has happened then is that in the adjoining houses there have been many cases of small-pox, and, as the distance increased, the houses attacked have become fewer. But in the case of scarlet fever this is not so. It more frequently happens that the patients in the nearest beds escape, while someone the other end of the ward is attacked. This might, of course, in any given case, be explained by saying that the particular patient was more susceptible to scarlatinal infection, but this distribution happens far too often for this explanation to hold good as a general rule, while it is quite in accordance with the view—which is undoubtedly the correct one—that the infection of scarlet fever is conveyed mainly by hands, instruments, and clothing, fairly intimate contact being required.

It does not do then to legislate mainly against aerial convection. Examples of this mistake may be found in the building of glass cubicles without at the same time protecting the hands of the nurse, and in the placing of patients in small isolation wards, two or three of which are managed by a nurse who is too inexperienced, or otherwise unsuitable, for responsible work in a larger ward. *Structural separation of patients is an excellent adjunct to separation by asepsis in nursing, but it must never be allowed to replace it*, and there is often, I think, a danger that it may give a false sense of security by making a careless nurse more careless.

Still, we must not altogether neglect the air, and there are three points to which I would draw special attention.

Firstly, when infected matter is coughed or breathed out into the air it soon dries and becomes dust. The more perfect the system of ventilation, the greater likelihood is there of this infective matter being conveyed right out of the ward before it has time to become settled. Hence the advisability of a free current of air in the ward. With many nurses I am afraid there is some confusion between temperature and ventilation. Quite often, I have been told, when I have drawn attention to the closeness of the air of the ward, that the *temperature* is only so and so. As if there was no such thing as cold stuffiness or warm freshness!

It is, then, the dust in the air that we must consider, and here the main point is that all dust should be removed by damp sweeping and rubbing, even if it does spoil the polished floor. Personally, I detest wood floors, and much prefer terrazzo. There is no avoiding the fact that if the floor is of polished wood,

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