

hours of rest from disturbance of his wound, and the pain and emotional disturbance consequent thereon. How much better, then, is his state when he can be left entirely alone for days and weeks. Unfortunately, this is often impossible or undesirable with the present modes of drainage. Though it is no longer necessary to meddle with wounds in order to pull away ligatures (thanks to Mr. Lister's invaluable invention of the absorbable catgut—a very great step in the direction of rest), still there is the drain-tube in the wound as a foreign body. For this reason, we are obliged to take down any dressing which includes it, in order to shorten or remove it altogether, no matter whether the dressing itself could be left on otherwise or not. Could this be avoided, it would be most desirable. And it appears possible that it may be so in the future. In a recent number of *Langenbeck's Archiv*, there is a very interesting article by a Dr. Neuber, on the use of soluble drainage-tubes. In this, he relates his experience with such tubes in a number of cases. They were made of decalcified bone, which he had found by experiment to be the best material for the purpose. Using these, he was able to leave a Lister's dressing, with some extra packing of salicylated wool, undisturbed for fifteen days, when the tube was found to have been absorbed, and its track healed. Now, if these absorbable drain-pipes can be combined with the catgut ligature and suture, we may perhaps be able hereafter with care to put up an amputation wound once for all in a pure, dry, absorbent material, and leave it so until it is completely healed before removing the first application. This, if achieved, would go near to realize our ideal dressing, combining cleanliness, adequate drainage, and complete rest.

Let us glance now at the dry cotton-wool permanent dressing as a method of wound-treatment, and see how much of these three factors it contains. We have all been familiar, no doubt, for many years, with the use of this material for injuries of various kinds, and have seen it of benefit. But one of the first to employ it as a permanent dressing to be left on for weeks was M. Alphonse Guérin, of Paris. And remember, please, that it is not the material employed, so much as the fact of his venturing

to leave it so long undisturbed round a wound, that was the novel feature of his practice which has attracted much attention. I gather from reading, and from a conversation with himself, about a year and a half ago, that, as carried out by him, this method simply consisted in wrapping a very large quantity of ordinary cotton-wool round the wound, which had not been cleaned in any particular way. This was then bandaged tightly around the part, and so formed an elastic, even-pressing, and somewhat absorbent covering, which he left undisturbed for weeks, or until the part was healed, or nearly so. This certainly secured rest, but no particular provision was made for cleanliness at starting, nor, so far as I know, for drainage.

Not long after M. Guérin's visit, Mr. Erichsen suggested to me to give this plan a trial in the hospital. He had, I believe, done so himself in private, and had formed a favourable opinion of it. I did so, as you know, in an amputation of the leg, and had such a satisfactory result that I have employed it since in two amputations of the thigh, and one of the breast. As this is the only systematic test of the method that I know of in a hospital in this country, it appears worth while to take a few notes of the results. These you have been able to watch for yourselves, so I may be brief, and avoid too much detail. But I have essentially modified M. Guérin's method in these cases, feeling bound to do so, and as follows. Knowing what cotton-wool often is in hospital, where it is left about here and there—namely, a trap for dust and dirt—I have had all that employed here baked at a dry heat of 300° to 400° Fahr. This, you know, would render all organic matter in it innocuous, and certainly destroy all germs. Now, pure dry cotton-wool is well known to be a perfect shield against the access of dust and germs to substances covered by it. I need not allude to the familiar experiments which go to prove this, and that air is completely filtered of all decomposition-exciting impurities (whatever they may be) by passing through it. If this be true, a wound perfectly clean in the first instance, carefully enveloped in perfectly clean cotton-wool in sufficient amount to absorb its discharge, ought to remain quite free from contamination from without until the dressing is