

AMPUTATION IN WAR SURGERY.

Dr. M. Fitzmaurice-Kelly, F.R.C.S. Eng., Temporary Lieutenant, Royal Army Medical Corps, and attached to No. 13 General Hospital, Boulogne Base, British Expeditionary Force, contributes to *The Lancet* an interesting paper on the above subject, in which he describes a method of amputation widely practised in the present war. He writes in part:—

“The first maxim of the surgery of the extremities at all times is, I take it, a rigid conservation, and this is far more true in time of war than in the ordinary work of civil practice. With careful treatment many injured limbs, the result of shell wounds (which, had they been caused by a motor omnibus, would have been condemned to summary amputation), make a good recovery, and leave a useful, if imperfect, member. Nevertheless, there remain cases, all too numerous, where the sacrifice of a limb has to be faced as the only safe course, and one is driven to amputate in conditions utterly different from those of any previous experience, in which the routine methods are inapplicable, or, if applied, bring disaster in their train.

“The object of the present note is to call attention to a method of amputation first suggested, as far as I know, by me, and now widely practised in the military hospitals of this part of France, both by British surgeons and by our French *confrères*. It has, I think, certain advantages over the methods previously employed, and in many cases saves life or limb. . . .

“The chief conditions calling for amputation in the present war have been compound comminuted fractures and gaseous gangrene; the latter one of the most terrible complications in the earlier days of the war, but apparently diminished for the time by the advent of colder weather. In both a virulent infection is present, and ordinary amputations are very frequently followed by recrudescence of the infection in the flaps. Further, the mortality following secondary amputations has in the past been high. It is impossible to make even a guess at the figures for the present war, but on the combined statistics of the Spanish-American and Boer Wars, Lagarde states it as 42.5 per cent. in the case of the thigh and 21.2 per cent. for the leg. In the present war, where gangrene has been a prominent feature, the figures, at any rate in the earlier days, would probably be higher.

“It has long been recognised that in war surgery amputation flaps should be cut rather

short, and in the present war the French surgeons soon found that it was better not to stitch them at all, but to pack gauze between the flaps. The method I advocate goes still farther—goes, in fact, right back to the dawn of surgery. It consists in a simple circular division of all the tissues, including the bones, at the same level, and that level the lowest possible. The skin is divided by a circular sweep, the muscles are divided at the level to which the skin retracts, and the bone is then sawn at the same level. The bleeding points are secured and tied, the nerves pulled down and cut short, and a dressing is then applied to the raw surface of the stump.

“The operation is, as will be seen, very simple and very rapid in execution, and the results have been surprisingly good. The stump is not painful if care be taken to shorten the nerves, and there is very little shock. Most surprising of all, it can be performed at the margin of gangrenous tissue, without, apparently, any danger of the gangrene spreading to the stump. . . .

“To sum up, the advantages claimed for the method are: 1. Economy of tissue. The amputation is performed at the lowest level at which a flap could be cut, or even lower, and all recoverable tissue is thus preserved. 2. It is applicable to otherwise hopeless cases, such as wounds or gangrene at the root of the limbs, and in these cases carries a much better prognosis than disarticulation at the hip- or shoulder-joint. 3. It is very rapidly done, and there is very little shock. 4. The surface from which septic absorption can occur is the least possible, and the drainage is free. 5. The nutrition of the stump is unimpaired; in this respect its advantage over a flap amputation is obvious. 6. It is so simple that it is within the range of everyone, and does not need an experienced surgeon for its performance.

“It has, I think, other advantages in particular cases. One in particular, that presents itself not infrequently, is the case of multiple wounds. As an example, a case in one of the French hospitals in this town may suffice. The patient was wounded by a shell which reduced the foot to pulp and sprinkled the whole limb with splinters to above the level of the knee. In this case it was urgent to remove the foot, and the presence of septic wounds in the leg made it impossible to obtain suitable flaps. The foot was removed by transverse section of all the tissues just above the ankle-joint, and the other wounds treated by free drainage. The patient made a good recovery with the loss of the foot only.

“The chief disadvantage of the method is

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