

a patella is sutured with a view to getting secure bony union, a wounded intestine with a view to preventing extravasation of faeces into the abdominal cavity.

The sutures of which I now wish to speak, are employed with intent to influence the whole course and final result of wounds in general. For instance, let us suppose buried sutures of the first kind to have been used to unite the two ends of a divided nerve; the use of the other kind of buried sutures would now commence, and proceed as follows.

Whatever muscles or aponeuroses had been divided in cutting down upon the nerve would be restored to their original relationships, and kept there by aseptic animal sutures, such as catgut; then the wound in the deep fascia would be separately sewn up. Finally, the wound in the skin would be closed by either catgut or silver, or whatever might be preferred. What good do we expect to get from this?

1. We need no drainage-tubes. No spaces or pockets are left wherein blood or serum can collect, and, therefore, it does not collect. I presume that all wounded vessels, of a size such that the blood-pressure would force blood out of them in spite of the buried sutures, have been carefully secured, and that the wound is thoroughly aseptic.

2. The sutured muscles and aponeuroses are eventually perfectly restored as regards function, as also is the deep fascia. Even the deep fascia has important functions, especially in certain localities, and in connection with the following points.

3. Deep, rough, and depressed cicatrices are avoided.

4. Necrosis of bone and sloughing of soft tissues are prevented.

I will describe briefly two or three of the above cases and their results. In amputating the leg, two lateral and very short rounded skin-flaps were made. A very short distance (about half an inch) above the angles of junction of the skin-flaps, the muscles were divided by a circular sweep. The periosteum was divided nearly as low down as the muscles, and turned back up to the level where the bones were divided. The periosteum must be reflected to an eighth of an inch or more beyond the point

of division of the bone, and carefully held out of the way, without being stripped further up, while the saw is being used. Next, the vessels are tied until it is time to put in the sutures. About three or four will draw the periosteum securely over the cut surfaces of each bone, leaving a small opening opposite the medulla. Next, the muscles and aponeuroses of the extensor side are united to those of the flexor side, more or less *en masse*, by five or six sutures of strong catgut. These sutures had better not, as a rule, be made to go quite through to the deep surfaces of these structures, but should be half an inch to one inch from the cut edges at the superficial surface. The bones are thus completely covered. Next, the deep fascia should be separately sutured, and lastly the skin.

Almost the first time I ever tried buried sutures was in an amputation of the leg (middle third) done in February 1884 in the West London Hospital. The flaps, when thus sewn up, were too tight to allow room for a drainage-tube to be inserted without violence. Therefore none was used, except one of very small size passed through one corner of the skin-incision, but not into the depth of the wound. This case was further complicated by the fact that, owing to an unhealthy condition of the marrow, the medulla of both tibia and fibula was scraped out right up to the upper epiphyses of those bones; and the medullary cavities, thus emptied, were injected with liquor hydragryi perchloridi (whose strength, it may be remembered, is just over 1 in 1,000).

Healing took place throughout by the first intention, except as regards the skin, which gaped a little when its sutures gave way. However, the muscles, and doubtless the perioscal sutures, held on; and the edges of skin soon, as it were, crept together again. The temperature rose on several days to 101°, and then gradually sank to normal on the tenth day. There it remained, except that, once or twice during the next month, it rose to 102°, for no reason in any way connected with the stump, as far as could be made out. The patient has long been quite convalescent, and is using an artificial leg.

After the excisions, the wedge-osteotomies and the suturing of the patellæ, the excellent