In conclusion, I would like to express my thanks to Lieutenant-Colonel F. A. B. Daly, C.B., and brother officers here, for much kindly advice and assistance, and to Private Buckell, laboratory attendant, for aid in working out bacteriological data.

HOW TO DEAL WITH THE SAC IN OPERATIONS FOR INGUINAL HERNIA.

By Major F. J. W. Porter, D.S.O.

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As Captain Churton has pointed out in the Journal for December, the isolation of the sac is not in all cases by any means a simple matter, and constitutes practically the most difficult part of the operation. I should like to mention the method which I have adopted for many years past, and which has proved satisfactory.

The sac is invariably to be found at the lower border of the internal oblique, in front and to the inner side of the cord, covered simply by cremaster muscle. The lower edge of the internal oblique is forcibly retracted upwards and outwards. With two pairs of dissecting forceps, the cremaster muscle is stripped inwards and outwards in a direction parallel to the cord, exposing the sac, which can of course be recognised by its white appearance. The sac is now picked up by two pairs of Spencer Wells forceps applied at right angles to its long axis and held by an assistant.

An incision is very carefully made through the sac between the points of the forceps and deepened until a shining membrane is seen. This is, of course, the posterior surface of the sac lined by peritoneum. The edges of this incision are now held by forceps and a blunt dissector is passed into the sac in an upward direction. If the sac has been properly opened the instrument passes into the abdomen without the slightest resistance.

The opening of the sac is now enlarged upwards and downwards so as to admit the left forefinger. This is inserted and the edge of the sac gripped between it and the thumb-nail at the cut edge. With a pair of dissecting forceps, the structures of the cord are stripped from the sac, keeping very close to it and working in a direction at right angles to its long axis. As the stripping progresses, the sac is pulled towards the operator and firmly held by the thumb-nail against the forefinger. In this manner it is possible to work round about three-quarters of the sac. The circle is completed by working in the opposite direction in the same manner. The stripped sac is now quite free from the cord for about the space of one inch, and the cord is still firmly adherent to its natural bed. The stripped portion of sac is then clamped by a Spencer Wells forceps and cut across.
In the case of a congenital hernia, it is advisable to close by a ligature the upper end of the portion of sac which it is intended to leave.

It will be seen from this description that it is not considered necessary to isolate or remove the whole of the sac. Only sufficient is detached to enable it to be dealt with in the later stages of the operation.

The assistant now holds the cord with a piece of gauze, and draws it steadily downwards, while the operator draws the sac in the opposite direction and strips it off the cord. This isolation is systematically done, each aspect being cleared in turn, and all purposeless tearing is avoided. The stripping is continued until the sac is seen to widen out into a funnel, and the epigastric vessels are either seen or felt on the inner side. I do not think the importance of isolation to this extent can be exaggerated.

There are a few operators who are content with ligature of the sac at the external ring, or a little above it. In my opinion such a "radical cure" will be very likely to relapse. I think we cannot depend on any operative measure which does not entail ligature at the very highest point, and this can be easily identified by the presence of the epigastric vessels. For cases of large hernia with a very dilated inguinal canal it is necessary to narrow the latter by some method such as Bassini's, but I think in other cases it is quite unnecessary, provided one has dealt with the neck of the sac at the internal ring.

Having fully isolated the sac, and ascertained that it is empty, transfixion is made from the inner side, so as to avoid puncturing the epigastric vessels, and a Staffordshire knot put round the sac, traction in a forward direction being made while it is being done. I always use kangaroo tendon for this purpose. The sac, in the twisted position, is then pulled upwards under the free edge of the internal oblique and through a hole made in this muscle by carrying the needle through the twisted sac. This causes a convexity on the peritoneal surface.

The operation is completed in the usual manner, but if Bassini's method is used the cord must be lifted from its bed first, in order to pass the sutures behind it.

A SYSTEM OF SANITARY CONTROL FOR MILITARY CANTONMENTS IN INDIA.

By Lieutenant-Colonel R. E. R. Morse.
Royal Army Medical Corps.

This subject is of such vital interest to the Army in India that no excuse is required for my bringing to notice a scheme of sanitary supervision which I have found work smoothly and with good results. During a long experience of Indian cantonments, I have found, on joining a station for duty, that rarely was there a complete record of