

A SIMPLE METHOD FOR LOCALIZING AND REMOVING RADIO-OPAQUE FOREIGN BODIES

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The following method has been used by me for the past 15 years in well over 100 cases and has never yet failed. I have never seen it described or referred to in any of the surgical literature and it has the advantages of ease and accuracy.

The requirements are a sterile tray in the X-ray room containing local anaesthetic, 2 syringes (one 5 c.c. and one 1 or 2 c.c.), 2 needles (one hypodermic, and one intramuscular, 3 or 4 inches in length), some antiseptic paint, and a dish containing a few minims of methylene blue solution.

The affected part, having been cleaned, is screened to localize the foreign body and to decide the site of the skin incision to be made for its subsequent removal. If films have already been taken, this step is unnecessary. The lights of the X-ray room are then switched on and the local anaesthetic is infiltrated into the skin and down towards the foreign body, if necessary. The needle is directed towards the foreign body. The lights having been switched off and the screen switched on, the needle is approximated to the foreign body. Not infrequently it may be felt to touch the foreign body; if not, it is advanced till the point is adjacent to it and the position checked by rotating the limb so that views are obtained in two planes. Then one or two minims of the dye is injected and the needle withdrawn.

There is usually sufficient dye to mark the needle track and the site of skin puncture without injecting a further amount as the needle is withdrawn.

The patient is now taken to the theatre and the operation proceeded with, either under local or general anaesthesia. It should always be done, wherever possible, with a tourniquet in position to provide a bloodless field.

The incision is made centering over the blue point of the needle puncture. The track, and site of deposit

of dye adjacent to the foreign body, are easily traced. It is then usually a simple matter to find and remove the foreign body. It will be more difficult if too much dye has been injected so that it has spread widely in the tissues. The wound is loosely sutured and antibiotics administered.

This method is of course unnecessary where the foreign body can be felt, or where there is an abscess round a foreign body, as incision of the abscess usually reveals the foreign body lying with it.

The method was first thought of and used in 1940 in a war casualty with a piece of shrapnel in the lower end of the femur. This had entered on the medial side of the thigh and X-ray showed it lying beneath the cortex of the femur on the outer side, and just above the femoral condyle. The point of a long needle was placed on the outer aspect of the femur directly opposite the foreign body and the dye injected here subperiosteally. At the operation a hole in the cortex of the femur needed to be made only just large enough to extract the foreign body.

By this method a minute metallic foreign body has been removed from the median nerve in the arm, which had been producing pain and paraesthesiae down into the hand; also foreign bodies in the buttock, and deep in the palm. In many of these cases previous attempts at removal had been made, either immediately or some time previously.

No trouble has been encountered from the use of the dye, which is absorbed in a few days.

SUMMARY

An easy and exact method of radiological localization of radio-opaque foreign bodies is described wherein dye is deposited at the site of the foreign body so that its situation may easily be recognized at operation.