



Wire sutures: An aid to locating nerves

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SUMMARY. A technique is described using a wire suture to simplify the location of peripheral nerve ends at the time of secondary nerve grafting.

In the majority of peripheral nerve injuries primary microsurgical repair can be performed. In a small number of cases delayed secondary nerve grafting is required. Location of the cut nerve ends can be a tedious procedure due to scarring from the previous surgery. As an aid to nerve location at the second operation this simple technique has been developed and used in 10 cases.

Case report

A 12-year-old boy was referred following a laceration with glass to his left forearm 19 days previously. On admission he had a median nerve deficit of his left hand, with an infected trophic ulceration of his left index finger and a sub-acute infection of his forearm wound. Because of retraction of the nerve, repair without excessive tension was not possible and immediate nerve grafting was not performed due to the infection. The ends were joined with a 4/0 wire suture for later identification. Eight weeks later his wound was re-explored through the previous incision. The distal end of the nerve was located and the wire suture traced to the proximal end (Fig. 1), and the gap then grafted.

Discussion

Ideally, nerve repair should be carried out primarily without tension in a suitable bed. Unfortunately it is not always possible to fulfil all of these conditions, necessitating secondary nerve grafting.¹

Linking the ends of the nerve with a wire suture simplifies and shortens re-exploration in these cases. Tracing the suture proximally and distally identifies the nerve ends, which can then be prepared for grafting.

References

1. Millesi H. The nerve gap; theory and clinical practice. *Hand Clin* 1986; 2: 651-63.

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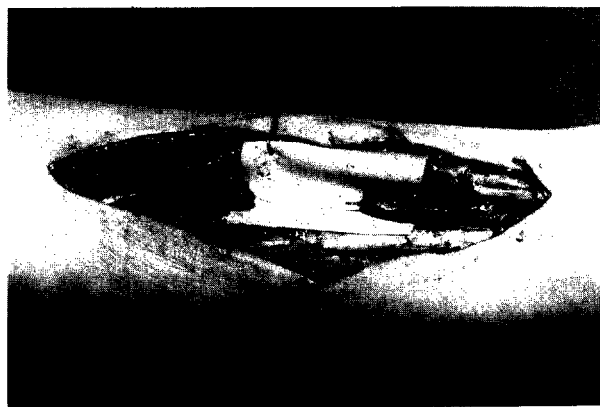


Fig. 1

Figure 1—Intraoperative photograph at the time of secondary nerve grafting illustrating the wire suture between the proximal and distal nerve ends.