INSTRUMENTS AND TECHNIQUES *

Dupuytren's contracture: the deferred Z-plasty

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Summary
The technique of dissecting Dupuytren's contracture through a straight incision placed along the contracting band and deferring Z-plasty to be performed as a secondary procedure is safe, simple, and short and allows maximum skin viability and earliest mobilisation.

Introduction
Conservatism in patient selection and surgical dissection is essential in the treatment of Dupuytren's contracture to avoid complications which readily lead to worsened hand function and a regretful surgeon and patient. Skin loss is the greatest hazard and predisposes to delayed healing and a stiff hand with loss of flexion.

With these facts in mind a simplified surgical approach is described suitable for most patterns of Dupuytren's disease, preferable in many, and safest in all.

Technique
The technique is simply to dissect the Dupuytren's tissue through a straight incision placed over the length of the contracting band and then to close the wound directly without fashioning Z-plasty flaps. This allows a shorter tourniquet time, maximum skin viability, and a wound which is not inverted on flexion of the finger. It therefore allows earliest mobilisation (after 48 h) and early healing. The presence of a straight wound over flexion creases is of little concern in the important early postoperative stage. A Z-plasty release of any impending scar contracture can be carried out as a secondary procedure under safer circumstances and under local anaesthesia. In most cases secondary Z-plasty has been deferred indefinitely. Some patients have developed scar discomfort over the proximal flexor crease of the finger requiring release, but no patient has had extension of the finger restricted by shortness of the volar scar.

Discussion
A straight incision over the Dupuytren's band is safest with regard to preservation of the digital nerves and the overlying skin. It allows good access and minimises the degree of skin undermining. Z-plasties increase skin length

FIG. 1 Dupuytren's contracture of the right little finger. The interrupted lines indicate the site of two thick bands of Dupuytren's tissue. Adequate excision will require extensive undermining of the overlying skin. The full line extending down the centre of the finger indicates the site of incision to allow the safest, adequate surgical access.

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and avoid scars across flexion creases but jeopardise skin viability because of the further incisions that they require, the distortions they impose, and the increased tension they produce around the finger circumference. With adequate dissection the need to increase skin length is seldom a problem and the risk of a crippled hand with loss of flexion for the sake of gaining a few further degrees of extension is not justified.

Scar rearrangement by Z-plasty to avoid webbing across the flexion crease can be deferred until circumstances are more favourable and it becomes necessary. Palmar scars in the age group of Dupuytren's contracture mature quickly, unlike similar scars in children.

It is not claimed that Z-plasty should always be avoided at the primary excision of Dupuytren's contracture but that it can be deferred in the more difficult cases in which the skin flaps are thin.

Excision of Dupuytren's tissue through multiple transverse incisions is not always possible, particularly with severe contractures because of limited access and danger to the digital nerves. The 'open' method has the restrictions of transverse incisions and although it allows early mobilisation, morbidity is increased owing to the prolonged healing time and it is not possible where the flexor tendons are exposed.

Skin grafting may be indicated for skin loss or to reduce recurrence in patients with severe Dupuytren's diathesis but offers no other advantages. Mobilisation must be delayed until the grafts are established. Early mobilisation with skin grafting is precarious and is really the 'open' method with a temporary graft dressing on the wound. A straight wound along the length of the finger allows early mobilisation without risk of wound disruption.

**Bibliography**


