SURGICAL TECHNIQUE

Retrograde Stripping of Recurrent Varicose Veins

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Key Words: Varicose veins; Recurrence; Surgical technique.

Introduction

Recurrence following surgery for primary long saphenous varicose veins remains a common problem, with recurrence rates of 6 to 60% being quoted. This poses a significant burden for Vascular Surgeons who perform this type of surgery, as 20% of varicose vein surgery is undertaken for recurrence. Redo groin surgery is technically more demanding with a higher complication rate as a consequence of fragile recurrent varicosities, altered local anatomy and dense scarring from the original operation.

We report a technique for patients who present with recurrent varicose veins in the distribution of the long saphenous vein and whose pre-operative Duplex scan shows no identifiable sapheno-femoral junction (SFJ), but an intact long saphenous vein (LSV). This technique involves retrograde stripping of the intact LSV without re-exploration of the groin.

Surgical Technique

Pre-operatively, the site of the LSV in relation to the medial condyle is exposed, at the pre-marked site and elevated with artery forceps. A small incision is made in the LSV and a disposable stripper is passed retrogradely up the LSV as far proximally as possible. The stripper usually passes under the tourniquet with ease. The head of the stripper can be palpated when it stops at the end of the LSV below the groin. A small stab incision is made over the stripper head and the stripper with the vein is delivered into the wound using artery forceps. The stump of the LSV above the stripper is ligated with 2/0 Vicryl and the LSV is then stripped retrogradely and delivered through the stab incision. The small incisions are closed with subcutaneous Vicryl or Steristrips and a Panelast compression bandage applied before removal of the tourniquet.

Discussion

The technique described is only suitable for those patients that present with recurrent long saphenous varicose veins, in whom Duplex scanning finds no identifiable SFJ but an intact LSV. Some surgeons do not strip the LSV, even though this increases the risk of recurrence. Occasionally, a tributary or bifid branch of the LSV may be stripped, leaving the main LSV intact. In these patients the recurrence seems due to a refluxing column of blood in the intact LSV. In our view the multiple, small venous connections found in the groin of such patients develop due the presence of an intact, refluxing LSV rather than being the primary cause of the recurrence. The technique appears less surgically demanding and quicker than conventional
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which is a risk associated with all stripping techniques. This risk can be avoided if a few basic principles are followed:

- This technique is not carried out if the pre-operative Duplex scan shows an intact SFJ or another connection between the LSV and deep venous system near the groin.
- The stripper can be palpated throughout its course subcutaneously.
- Failure to pass the stripper or failure to palpate the head in the upper thigh requires re-exploration of the groin.

Stripping in a retrograde direction below the level of the knee has been shown to be associated with increased numbness in the distribution of the saphenous nerve but this seems irrelevant above the knee. The wound required is much smaller than that required to re-explore the groin and as a consequence the associated pain and discomfort is reduced and we have not experienced any wound seromas which can pose a problem following conventional groin re-exploration.

Bleeding and subsequent bruising is kept to a minimum using a tourniquet. All procedures have been performed as day cases and patients appear to be happy with the results. It now carried out routinely in those patients who fulfil the criteria (Fig. 1).

Fig. 1. Flow diagram for selecting patients for retrograde stripping of LSV.

We attempted this procedure in 17 patients and successfully stripped the LSV in 15. We could not pass the stripper up the LSV in two patients who underwent conventional groin re-exploration. This confirmed the pre-operative Duplex finding of an absent SFJ and re-exploration was probably of little benefit. During the same time period we have performed 83 redo groin explorations and so this technique seems suitable for about 15–20% of patients with recurrent varicose veins. The risk of passing the stripper into the deep venous system seems small, as the SFJ is absent. There is a theoretical risk of passing the stripper into the deep venous system through a large mid-thigh perforator,