Figure 1 Anterior to posterior view of the biceps tendon repair. A, C and B, D refer to the two suture strand pairs from the distal anchor, X1. E and F refer to the two strand pairs from the proximal anchor X2.

Figure 2 Lateral view of the biceps tendon showing its L-shaped re-attachment to the radial tuberosity using bone anchors.

anchor sutures are then tightened bringing tendon down onto the bone in an L-configuration (Fig. 2).

DISCUSSION

The technique is simple to perform, provides a sound repair, and ensures a large tendon-to-bone surface contact. We have performed this in 25 patients with no cases of tendon re-rupture.

'Laser avulsion'

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BACKGROUND

Varicose vein due to superficial venous insufficiency is a common problem world-wide^{1,2} and endovenous laser ablation (EVLA) has been used for treatment for at least 6 years.³ Skin burn and

Figure 1 'Laser avulsion' which is a novel combination of laser ablation of proximal long saphenous vein (LSV) and avulsion of the distal thigh and knee segments of LSV. After laser ablation, the laser fibre is removed and the vein is tied on to the sheath. The lower shaded segment of vein is avulsed by pulling the sheath.

permanent staining can occur when the laser ablation is used for veins which are in very close proximity to the skin⁴ particularly in thin, fairer individuals without much subcutaneous fat. While performing EVLA in these patients, it may be difficult to push the distal vein away from the skin with tumescent.

TECHNIQUE

The authors describe a new technique, which is a novel combination of EVLA of the proximal superficial vein and stripping or avulsion of the distal vein (Fig. 1). The authors call this technique 'laser avulsion'. Because there is enough fat in the thigh and the long saphenous vein (LSV) is deep seated, EVLA of the proximal LSV segment can be safely undertaken. In the distal thigh and around the knee where the vein can be close to the skin, one can make a small (2 mm) cut down on to the vein, remove the laser fibre but leave the sheath *in situ* and tie the vein secure to the laser sheath. The ablated vein is then disconnected proximally and the sheath is pulled out with the distal segment of the non-ablated vein. Therefore, the proximal thigh segment of the LSV is laser ablated and lower thigh, knee and upper leg segment of the vein is stripped.

DISCUSSION

The advantage of this procedure is one can avoid both the groin incision of the Trendelenburg procedure and potential permanent discoloration and skin burn of the lower aspect of superficial vein which may happen in EVLA.

References

1. Campbell B. Varicose veins and their management. *BMJ* 2006; **333**: 287–92.
2. London NJ, Nash R. ABC of arterial and venous disease. Varicose veins. *BMJ* 2000; **320**: 1391–4.
3. Min RJ, Zimmet SE, Isaacs MN, Forrestal MD. Endovenous laser treatment of the incompetent greater saphenous vein. *J Vasc Intervent Radiol* 2001; **12**: 1167–71.
4. Durai R, Srodon PD, Kyriakides C. Endovenous laser ablation for superficial venous insufficiency. *Int J Clin Pract* 2008 [Epub ahead of print].