Yarl vein flap fistuloplasties for juxta-anastomotic stenoses

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BACKGROUND

The juxta-anastomotic swing segment is the commonest site of stenosis in autogenous arterial venous fistulae.¹ This is particularly true for radial cephalic fistulae.

TECHNIQUE

We describe two novel surgical techniques that are useful in revisional fistula surgery.

Yarl 1 vein flap fistuloplasty (Fig. 1)

The distal venous limb of a side-to-side fistula is mobilised and transected. The outer border of the vein is opened till beyond the stenosis.

Figure 1 Yarl 1 vein flap fistuloplasty.

Figure 2 Yarl 2 vein flap fistuloplasty.

The vein is folded back and sutured to the apex, creating a triangular patch, converting the fistula to end-to-side. Dog-ears are eliminated.

Yarl 2 vein flap fistuloplasty (Fig. 2)

An end-to-side fistula with a stenosis and an intact dorsal cephalic branch is shown. After mobilising and transecting the branch, the branch and the cephalic vein are opened in the crotch between the two, till beyond the stenosis. The flap is then completed, effectively turning what was a pair of trousers, into a skirt.

DISCUSSION

In our experience, surgical correction of long stenoses gives excellent, long-term outcomes. Potential for narrowing at one of the two corners of a conventional diamond patch is eliminated by the use of these flaps, which are named after the birth place of one of the authors. Radial cephalic fistulae are illustrated but the principles are applicable to other fistulae too.

Reference

1. Badero OJ, Salifu MO, Wasse H, Work J. Frequency of swing-segment stenosis in referred dialysis patients with angiographically documented lesions. *Am J Kidney Dis* 2008; **51**: 93–8.