



Straight Femoral Arteriovenous Fistula Formation with One Stage Great Saphenous Vein Transposition

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INTRODUCTION

Lower limb haemodialysis access creation can be attempted in patients where upper limb options are absent. A technique is described for arteriovenous fistula (AVF) creation using a transposed great saphenous vein (GSV) without the need for loop formation.

Technique

The superficial femoral artery (SFA) is used for inflow just proximal to Hunter's canal. A longitudinal medial thigh incision is made for harvesting the SFA and GSV. A side to end anastomosis is performed using 6-0 polypropylene suture (Fig. 1A). The length of anastomosis is 5–6 mm, to reduce the risk of steal syndrome. After performing the anastomosis, the GSV is transposed to a superficial location, and fascia and subcutaneous tissue layers are closed over it

with absorbable suture (Fig. 1B). Following adequate mobilisation, 15–17 cm GSV is obtained for cannulation. GSV transposition is typically undertaken to facilitate needling, but it may be not required in a very thin patient.

The minimum diameter of GSV should be 5 mm, to promote successful AVF maturation. A small/thrombosed/absent GSV, severe occlusive arterial disease and venous varices would be a contraindication to this approach. The presence of a GSV thrill typically indicates a well functioning AVF. This intervention has been successfully undertaken in 18 patients (12 men, six women; age range 55–76 years).

CONCLUSION

Straight GSV transposition at femoral AVF formation is simple to perform and provides a good length of superficial GSV that is easy to needle.

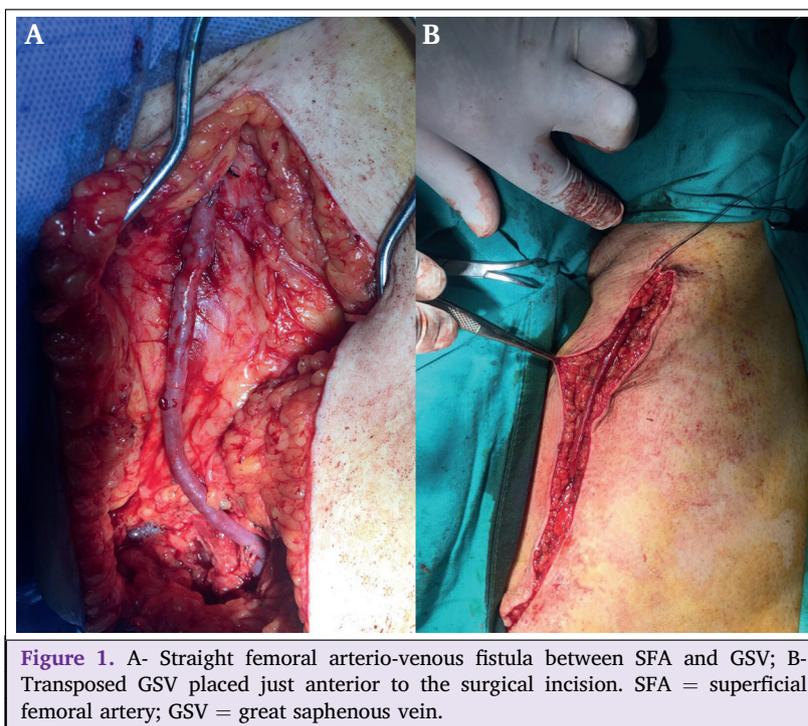


Figure 1. A- Straight femoral arterio-venous fistula between SFA and GSV; B- Transposed GSV placed just anterior to the surgical incision. SFA = superficial femoral artery; GSV = great saphenous vein.

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