

Sharp Needle Recanalization: A Salvage Procedure for Failing Arteriovenous Fistula Due to Tight Uncrossable Venous Stenosis

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A 33-year-old male presented with malfunctioning brachio basilic arteriovenous fistula (AVF) due to short tight juxta anastomotic stenosis (►Fig. 1). Access was gained into the AVF draining vein, and multiple trials to cross the

tight stenosis using catheter and wire failed (►Fig. 2). Sharp needle recanalization was performed under ultrasound guidance, using 21G needle and wire to cross this tight stenosis (►Fig. 3a,b). Wire passed into the AVF

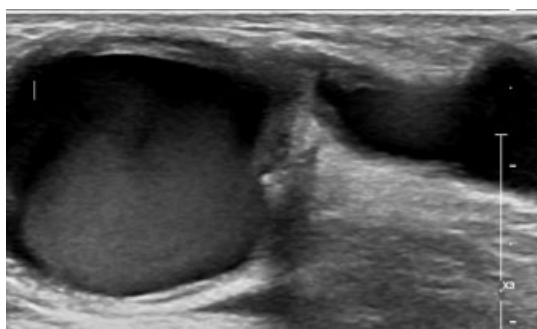


Fig. 1 Ultrasound of arteriovenous fistula (AVF) showing a juxta anastomotic tight stenosis and aneurysmal dilatation.

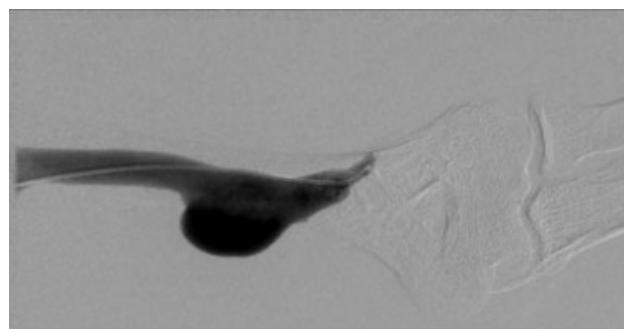


Fig. 2 Fistulogram showing patent arteriovenous fistula (AVF) with uncrossable tight stenosis.

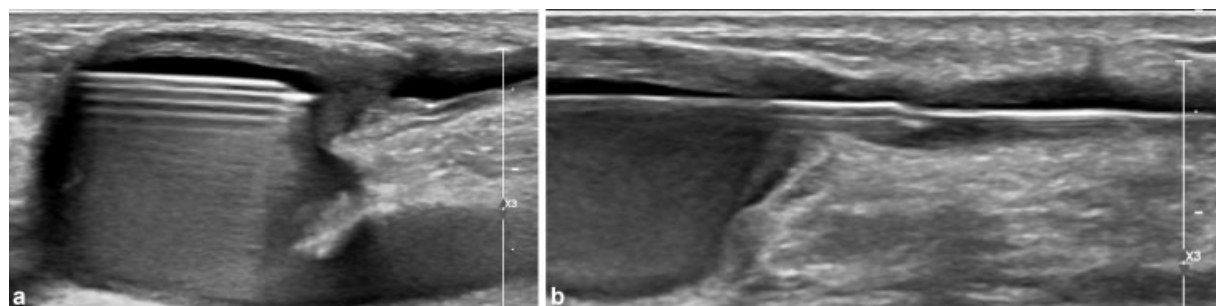


Fig. 3 (a and b) Ultrasound-guided sharp needle recanalization using 21G needle and wire.

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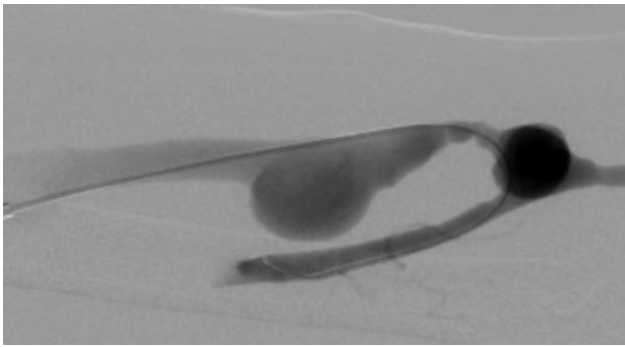


Fig. 4 Postballoon angioplasty fistulogram showing successful angioplasty without contrast extravasation.

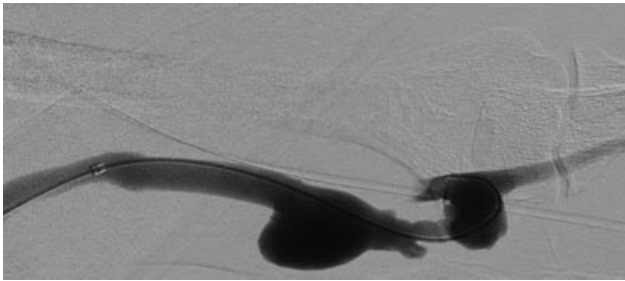


Fig. 5 Follow-up fistulogram after 2 years showing patent arteriovenous fistula (AVF).

draining vein and snared through the already placed vascular sheath. Balloon angioplasty was performed using 6-mm, high-pressure balloon and inflated for 3 minutes. Postangioplasty venogram showed successful result (► **Fig. 4**). Patient had follow-up fistulogram and angio-

plasty every 6 months for 2 years, and fistula remained patent (► **Fig. 5**).

Sharp needle recanalization is a well-known technique for central venous occlusion.¹ This technique is rarely used in peripheral veins.² Jump graft is a salvage technique used to bridge stenotic/thrombotic venous segment of AVF. Jump graft is created surgically or percutaneously by a mean of stent graft for failing AVF.³ Sharp needle recanalization is a minimally invasive alternative salvage technique to surgical jump graft in tight uncrossable AVF peripheral venous stenosis.⁴

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Conflicts of Interest

None declared.

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