



THE SOCIETY FOR
VASCULAR TECHNOLOGY OF
GREAT BRITAIN AND IRELAND

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Paper: Winter 2022/23 CPD questions

Personal Reflection:

Description of the Learning: SVT Winter 2022/2023 CPD Questions - Arteriovenous Haemodialysis Access Stenosis Diagnosed by Duplex Doppler Ultrasonography: A Review

Analysis: AVF is the preferred vascular access for haemodialysis, however they have a limited lifespan due to complications from stenoses. Although ultrasound is a very sensitive method of assessing stenoses, the stenosis definition criteria is not standardised in publications. Stenoses can result from thrombosis, atherosclerosis, medial calcinosis, or because of surgical manipulation or intimal hyperplasia. Each fistula or graft has a type of stenosis which is more common due to its shape and location.

Conclusion: Ultrasound is very sensitive in identifying AVF/AVG stenoses compared to physical examination and can be used in multiple ways to help prolong the life of the access. Although ultrasound can identify areas which may become problematic in the future, the current recommendations are to only treat those stenoses which are symptomatic.

Benefit to Current Practice: We currently have a robust and well-run renal access surveillance program at our trust, with input from a dedicated renal access nurse, vascular scientist, vascular consultants, and interventional radiologists. Our renal access nurse is based in the dialysis unit. All patients undergo routine and regular transonic or nephraflow measurements, and any changes in flow or cannulation issues are immediately reported to the access nurse, who can either arrange an immediate ultrasound, or book into a one-stop clinic slot.

Benefit to Service User: Using ultrasound to diagnose AVF/AVG stenoses means that the patient does not have to undergo an interventional procedure to determine whether the access is working properly. The appointment is made to coincide with the patient's current dialysis schedule, which means that another hospital appointment is avoided. Ultrasound is quick to perform, usually only 20 minutes or so, versus a diagnostic fistulogram, which would require a 1–2-day visit. Ultrasound also uses no contrast agents, so there is no risk of nephrotoxicity.

Description of the Learning: SVT Winter 2022/2023 CPD Questions - Medium Term Outcomes of Deep Venous Stenting in the Management of Venous Thoracic Outlet Syndrome

Analysis: Thoracic outlet syndrome is uncommon, and can affect the nerve, artery, or vein. This paper focused on venous TOS. This was a single centre retrospective review of patients who were

managed for vTOS with 1st rib resection followed by upper limb deep venous stent placement. Those patients who presented with acute occlusive upper limb DVT first underwent catheter directed thrombolysis and venous angioplasty or completed a course of oral anticoagulation until thrombus resolution prior to rib resection.

Conclusion: There were 33 stented lesions with 30 1st rib resections, with good subclavian and axillary vein stent patency in the medium term. Patency rates at 3 years were promising, with data suggesting that using deep venous stenting in addition to surgical decompression is effective in managing vTOS, and could decrease the morbidity associated with the condition.

Benefit to Current Practice: As we are a vascular spoke site, we currently perform diagnostic ultrasound scans to detect aTOS and vTOS, however the management of the conditions are determined by the network MDT, and any surgeries are performed at another trust.

Benefit to Service User: aTOS and vTOS are very painful, and in some cases very debilitating conditions. If venous stenting can reduce the symptoms experienced by the patients, and provide a decreased likelihood of recurrence, then it would be a minimally invasive process to undergo.