

Dialysis

Vascular Access

18. Management of subclavian and other central vein stenoses

CARI Guidelines

- a. The management of proven or suspected venous occlusion/stenosis requires full imaging with venography of the affected limb, and consideration of the importance of fistula/graft salvage in the affected limb in the context of the long-term management of each individual patient. (level B evidence)
- b. Before definitive placement of a stent is undertaken, discussion of the most effective treatment for the individual patient at a joint surgical/radiological/physician session is required. (level B evidence)

Practice Tips

- Stenosis or occlusion of a central vein may be asymptomatic, arising as a consequence of previous vein cannulations for central venous catheters, trauma or pacing wires. Placement of a fistula in the ipsilateral arm may precipitate oedema and venous hypertension.
- Angioplasty for lesions with stenosis, or sometimes with recent thrombotic occlusion can provide benefit, but re-stenosis is frequent. Management with angioplasty and stenting is possible but limitations of this technique apply because stents are not designed for this area (especially subclavian), stents may cross other draining veins (external jugular), stents may deteriorate due to the mechanical pressures, and stents may limit surgical repair/bypass options.
- Stenosis and occlusion of other central veins may require thrombolysis, angioplasty or surgery according to the anatomical issues and clinical significance.
- Prevention of central vein stenosis by avoidance of subclavian catheters is the most effective option.

What is the evidence?

Kovalik Ec et al. Correction of central venous stenosis: Use of angioplasty and vascular Wallstents. *Kidney Int* 1994; 45: 177-181.

Ashleigh R.J, Al-khaffaf H, Tronconi L, Ackrill P. The use of metallic stents to treat central and peripheral venous stenosis related to haemodialysis access. *Journal of Interventional Radiology* 1998; 13: 1-7. (retrospective review of the use and success of stents when angioplasty was unsuccessful/rapidly re-stenosed. Useful prolongation of access, but recurrences still required ongoing angioplasty)

Bhatia, DS, Money, SR, Ochsner JL et al. Comparison of surgical bypass and percutaneous balloon dilatation with primary stent placement in the treatment of central venous obstruction in the dialysis patient: one year follow-up. *Annals of vascular surgery*;10:452-455. Historic review of success with surgery vs stenting, similar success rates, small numbers)

What do the other guidelines say?

DOQI: Percutaneous intervention with transluminal angioplasty is the preferred treatment for central vein stenosis. (Evidence)

Stent placement combined with angioplasty is indicated in elastic central vein stenoses or if a stenosis recurs within a 3-month period. (Evidence)

BRA: No guidelines available

CSN: Treat central vein stenosis with percutaneous transluminal angioplasty (evidence: level III). Place a stent only after failed angioplasty.

Suggestions for Future Research

RCT: Angioplasty vs angioplasty/stenting

OUT OF DATE