



Editorial

Percutaneous Interventions for Peripheral Vascular Disease

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Percutaneous interventions are minimally invasive therapies for the treatment of patients with peripheral vascular disease. The main advantages of the endovascular approach are a low complication rate, a high technical success rate, and an acceptable clinical outcome. The special issue on percutaneous interventions in peripheral artery disease focuses on case studies on percutaneous interventions on peripheral vascular disease with review of literature.

In first case study, Borne et al. [1] presented 2 cases of innominate steal syndrome who underwent percutaneous revascularizations. The first case had revascularization for in-stent restenosis whereas the other case had revascularization for native artery atherosclerosis. surgical revascularization of innominate steal syndrome carries a high risk due to transthoracic approach [2–4]. The current literature is limited regarding outcomes of percutaneous revascularization of innominate artery. Small studies have demonstrated about 90–100% success rate for percutaneous revascularization of innominate artery [5–9]. There is a risk of peri-procedural stroke or TIA with both surgical and percutaneous revascularizations [2–4,5–9]. There is no evidence to guide the use of antiplatelet agents following percutaneous revascularization of innominate artery. However, the authors in the study prefer dual antiplatelet therapy for 3 months and indefinite mono-antiplatelet therapy, thereafter.

The second study by Singh et al. [10] presented a case who underwent successful closure of symptomatic renal arteriovenous (AV) fistula using a novel liquid embolic agent in a transplanted

kidney. Technical success rate of endovascular repair is very high [11,12]. The patient had resistant hypertension secondary to a small sized renal artery AV fistula in the tertiary branch. Given the small size of the AV fistula, authors performed liquid material embolization rather than a coil to close the fistula which can reduce ischemic complications [13]. The authors injected Onyx® (Covidien/ev3, Irvine CA, USA) through the micro-catheter to occlude the vessel feeding the fistula. Onyx® is a cohesive but non-adhesive liquid embolic agent; it contains ethylene vinyl alcohol copolymer and tantalum powder (for radio-opacity) suspended in DMSO. Tantalum powder is added to make it radiopaque. Contact with blood leads to formation of spongy embolus [14]. Its physical attributes make it possible for it to penetrate vessels as small as 5 micrometers in diameter [15]. Slow injection is preferred to avoid vasospasm and excessive reflux. The care must be taken to avoid reflux of Onyx® to other proximal vessels in order to avoid occlusion of other vessels. Complications of Onyx® includes retention of micro-catheters and sometimes distal vessel perforation [16].

Conflict of Interest

None

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