TCTAP A-171
Intermediate Clinical Outcomes After Endovascular Treatment for Proximal Subclavian Artery Disease - A Single Medical Center Experience in Taiwan
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BACKGROUND Subclavian artery disease can lead to disabling arm ischemia, angina, or verteobasilar insufficiency owing to subclavian steal syndrome. The objective of this study was to determine intermediate-term outcomes after percutaneous transluminal angioplasty (PTA) for localized obstruction of the proximal subclavian artery (SA).

METHODS Between March 2011 and October 2014, 21 patients (7 women; mean age, 65.8 ± 11.0 years) consecutively underwent PTA of severe (>75%) stenosis (n = 10, 45%) or occlusion (n = 12, 55%) of the SA (18 left-sided, 82%). Clinical outcome was evaluated based on the results within 30 postoperative days (technical success rate, improvement in upper extremity ischemia, steal syndrome, and perioperative complications) and the results after 30 postoperative days (incidence of ischemic stroke and restenosis). The mean follow-up period was 653 ± 311 days.

RESULTS The PTA approaches were mostly via the single access site (femoral artery) (n = 15, 71.4%) and 5 patients (23.8%) via bilateral approach (femoral and brachial artery). 10 (47.6%) patients had clinical symptoms due to verteobasilar insufficiency and twelve (57.1%) had disabling arm ischemia and one (4.8%) had angina pectoris. We achieved technical success in every patient and all received stents. There was no procedure related death and the rates of stroke or myocardial infarct were 0% during the follow-up period. All were asymptomatic at one month post intervention. Primary patency rate was 95.4% at 6 months, 86.3% at one year, and 81.8% at two years.

CONCLUSION PTA with routine stenting of obstructive lesions of the proximal subclavian artery is not only an effective initial treatment, but is also successful over the intermediate-term. PTA with routine stenting should be considered the first choice in these patients.

TCTAP A-172
Feasibility and Safety of Right Heart Catheterization via Arteriovenous Shunts in Patients on Maintenance Hemodialysis: A Prospective Study
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BACKGROUND Trans-femoral and trans-jugular venous accesses are commonly used for right heart catheterization. For hemodialysis patients, arteriovenous shunts (including fistulas and grafts) are created for repeated punctures for hemodialysis access. Theoretically, cardiac catheterization via the arteriovenous shunts will have the advantage of lower puncture site complications and patients will be more comfortable. However, little is known about the feasibility and safety of arteriovenous shunts for right heart catheterization.

METHODS We conducted a prospective study to follow right heart catheterization procedures performed in hemodialysis patients via arteriovenous shunts. The procedure details and outcomes were obtained from the clinical, angiography, and hemodialysis records. The feasibility, success rate, complication rate, and procedure time were collected.

RESULTS Total 13 patients received cardiac catheterization via AV shunts. The indication for right heart catheterization was pulmonary hypertension work-up. Five patients were male (31%), and the median age was 69 years old (interquartile range: 58-77 years). Five AV shunts were native fistulas (5/13, 38%). All patients had complete measurement of hemodynamic profiles (procedure success rate: 100%). No puncture site hematoma, vascular dissection, or shunt acute thrombosis occurred during the procedure, at two days, and up to two weeks after the procedure. The median fluoroscopy time was 6.9 minutes (interquartile range: 4.3-9.9 minutes). The median contrast volume was 28 ml (interquartile range: 15-40 ml). All the patients had complete hemostasis after the right heart catheterization and were discharged from the cath room within one hour after the procedure.

CONCLUSION The AV shunts can be used as an alternative route for right heart catheterization with acceptable feasibility and safety.

TCTAP A-173
The Snorkel Technique for Endovascular Aneurysm Repair with Challenging Neck Anatomy
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BACKGROUND We have recently treated abdominal aortic aneurysms (AAAs) with challenging neck anatomy by endovascular aneurysm repair (EVAR) using the snorkel technique (SnT), and this study was evaluating the outcomes of EVAR with the SnT.

METHODS We retrospectively reviewed the charts of patients who underwent EVAR with the SnT between January 2012 and December 2013. All patients underwent EVAR under general anesthesia. Bilateral femoral arterial access was obtained through bilateral femoral cut-down to place the stent graft main body, and brachial arterial access was obtained percutaneously to perform the SnT.

RESULTS A total of six patients were treated by EVAR with SnT. Two patients were treated with unilateral SnT, 2 with bilateral SnT, and 2 with combined SnT and the endowedge technique. We attempted to preserve 10 renal arteries, and could successfully perform with these techniques for nine renal arteries. After complete deployment of the endograft, intraoperative angiography showed no type Ia endoleak. During the median follow-up of 14 months (range, 8 - 18 months), no deaths nor aneurysm enlargement occurred, and all treated renal arteries were patent without further intervention.

CONCLUSION Our findings suggest that the management of AAAs by EVAR with SnT could achieve an adequate proximal seal, and preserve renal artery perfusion in patients with unfavorable neck anatomy.