THE KOREAN SOCIETY OF NEPHROLOGY
APCN & KSN 2024
June 13(Thu) - 16(Sun), 2024 Coex, Seoul, Korea
Promoting Sustainable Kidney Health: The Asia-Pacific and Beyond

Abstract Submission No.: A-0586

Endovascular Treatment of Chronic Superficial Chronic Total Occlusion Lesions in the Cubital Fossa in Hemodialysis Patients with Radiocephalic AVF

Sangeon Gwoo[1], Sunmin Kim[1], Woon Heo[2]
[1]Department of Internal Medicine-Nephrology, Lifeline Clinic, Korea, Republic of
[2]Department of Thoracic and Cardiovascular Surgery, Lifeline Clinic, Korea, Republic of

Objectives : The radiocephalic arteriovenous fistula is the first choice vascular access for hemodialysis patients. However, when only the deep vein alone is drained through the perforator vein without the superficial vein in the cubital fossa area, the cannulation segment becomes pulsatile and abnormalities such as prolonged hemostasis and increased venous pressure during hemodialysis are common. We performed endovascular angioplasty of the superficial vein chronic total occlusion (CTO) lesion in the cubital fossa to restore the proper blood flow drainage system of the superficial vein while preserving the native vessels as much as possible.
Methods : A total of 64 CTO cases were seen at the Lifeline Clinic from February 2023 to January 2024. We conducted a retrospective study of 40 intervention cases in 37 patients with radiocephalic arteriovenous fistula and CTO of the cephalic vein or basilic vein (median antecubital vein) in the cubital fossa.
Results : Of the 40 cases, 27(67.5%) were left RC AVFs and 13(32.5%) were right RC AVFs. Recanalization of the occlusion was attempted from the basilic vein (median antecubital vein) in 21(52.5%) cases, from the cephalic vein in 18(45%) cases, and from both sides in 1(2.5%) case in a single procedure. Recanalization was successful in 34(85%) cases and unsuccessful in 6(15%) cases, of which 2 cases were recanalized in the next procedure. Of the 34 successful cases, post-procedural cumulative patency was maintained in 26(76.47%) cases and patency was not maintained in 4(11.76%) cases. There were 4(11.76%) cases where F/U was not achieved or the AV access had to be abandoned due to steal syndrome. The mean F/U duration was 135 days.
Conclusions : For RC AVF, interventional restoration of the superficial vein CTO in the cubital fossa is an option for reliable cannulation and hemodialysis. Maintenance of post-procedural flow is important to ensure sustained patency of the CTO lesion.

image1.png

N = 40			
Site	Left RC AVF 27 (67.5%)	Right RC AVF 13(32.5%)	
Target CTO lesion	Cephalic vein 18 (45%)	Basilic vein 21 (52.5%)	Both 1 (2.5%)
Result	Success 34 (85%)	Fail 6 (15%)	

image1.png

N = 34			
postintervention assisted cumulative patency	Patent 26 (76.47%)	Closed 4 (11.76%)	Unevaluated 4 (11.76%)
Angioplasty devices	POBA only 33	POBA + stenting 7 (11.67%)	
Guidewire passage	Conventional 31 (92.5%)	Sharp needle recanalization 3 (7.5%)	