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A case of successful dilator-assiseted banding procedure instead of MILLER procedure for the treatment of dialysis access-associated steal syndrome

Jin Ho Lee, Hee-Ryong LEE
Department of Internal Medicine-Nephrology, LEESIN hemodialysis and intervention clinic, Korea, Republic of

Case Study : Vascular access(VA) is the lifeline of hemodialysis patients. When vascular access is created, various complications can occur. Dialysis access-associated steal syndrome(DASS) is one of the common complications, is mostly asymptomatic, but may cause pain, coldness, and delayed healing. When DASS occurs, treatment is to reduce the diameter of the VA to increase distal flow. 75-year-old male patient underwent Rt. brachiocephalic fistula surgery in 2023. The patient complained of a cold sensation in his right hand and severe stabbing pain, and the wounds on the tips of his second and third fingers had not healed for three months. In VA ultrasound, the blood flow of the brachial artery increased from 1200 to 2400 ml/min, and the diameter of the VA was 12mm. The diameters of the radial artery was 1 mm, and blood flow was observed in the distal to proximal direction. We decided to perform MILLER banidng procedure. A 5*40mm balloon was placed at the juxta-anastomosis site, the skin was incised, and the VA was dissected. Afterwards, a tie was made with 2.0 silk according to the balloon size, but the distal flow was not sufficiently improved. Afterwards, we decided to perform dilator-assisted banding, and the dilator(outer diameter 2.7mm) used for TCC insertion was placed on the VA, and ties were performed twice using 2.0 silk. Then, dilator was removed. Angiography showed normal flow in the radial artery and blood flow in the palmar arch. After 7 days of the procedure, the pain decreased from NRS 8 to 2, and the wound was almost completely healed. When DASS occurs, banding to reduce blood flow to the vascular access is the first treatment. For this purpose, not only MILLER banding or surgical banding, but also dilator-assisted banding can be used safely and effectively.

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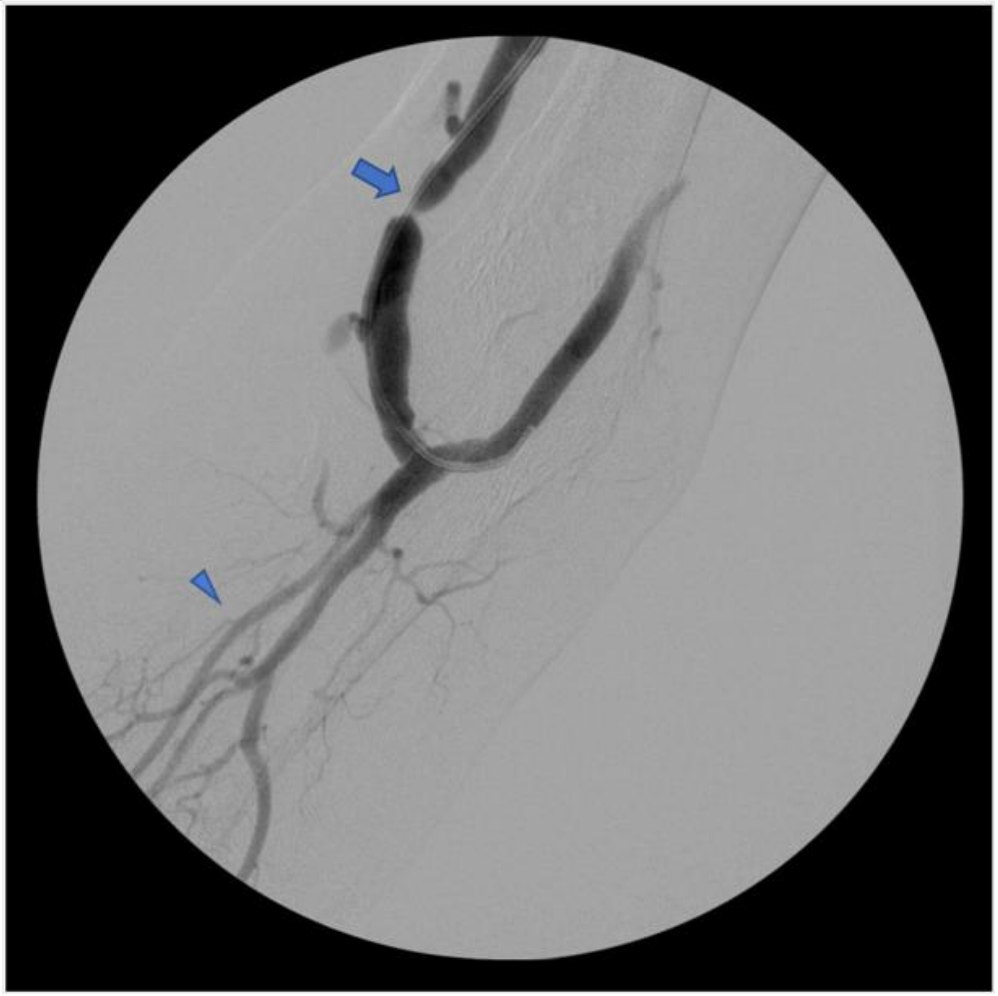

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