

1139 **Bail-Out Management of Guide Extension Catheter Fracture During Endovascular Therapy for a Severely Calcified Femoropopliteal Occlusive Lesion**

Toshiki Tsurumaki¹

Naoki Hayakawa¹, Hiromi Miwa¹, Masanao Inoue¹, Shinya Ichihara¹

¹ Cardiology, Asahi General Hospital, Japan

Background: Endovascular therapy (EVT) for severely calcified femoropopliteal lesions remains challenging, because device delivery is often difficult. A guide extension catheter is one option to improve deliverability. We report a case in which a guide extension catheter fractured during the procedure, requiring bail-out management. **Case:** An octogenarian man presented with intermittent claudication. His ankle-brachial index (ABI) was reduced on the right side (0.38/1.57). CT demonstrated a heavily calcified lesion extending from the right superficial femoral artery (SFA) to the popliteal artery (PopA). EVT was initiated via a crossover approach using an 8-Fr Destination guiding sheath. The popliteal artery was totally occluded by severe calcification, and lesion crossing required a CrossLead Penetration 14. Even after successful wire crossing, a microcatheter could not be advanced across the lesion. Therefore, a guide extension catheter (Guidezilla PV) was introduced to facilitate balloon delivery. However, even a 2.0-mm balloon could not pass through the Guidezilla entry port. When the Guidezilla PV was withdrawn, its distal shaft became detached from the proximal shaft at the sharply angulated iliac bifurcation, leaving the distal portion trapped inside the guiding catheter. A retrograde approach was then established via the distal posterior tibial artery using an Ichibanyari 18. After re-crossing the lesion with a CrossLead Penetration 14 from the retrograde side. Subsequently, a 1.5-mm balloon was advanced from the antegrade side into the retained Guidezilla PV and inflated within the catheter, allowing successful retrieval of the fractured segment. A rendezvous technique was then performed in the SFA, followed by guidewire externalization. After successful lesion crossing, a 2.0-mm balloon was delivered, and the procedure was completed with drug-coated balloon (DCB). **Conclusion:** We experienced a rare case of guide extension catheter fracture during EVT for a severely calcified lesion performed via a crossover approach. Retrieval of the fractured catheter required an additional retrograde approach and balloon-assisted bail-out technique. We discuss the potential mechanisms underlying guide extension catheter fracture, including device structure and procedural factors, as well as strategies for prevention and management.