

The Crosser System as “First Line Therapy” in Chronic Total Occlusions: Results of a Multi-Center Registry

David E Allie, MD¹; Raghotham R Patlola, MD² Kaylan Veerina, MD³; Britton Eaves, MD⁴; Jerome Danzell, MD⁴; Chris J Hebert, RT(R), RCIS² ; Agostino Ingraldi, MD²; and Craig M Walker, MD²

1 Louisiana Cardiovascular and Limb Salvage Center, Lafayette, Louisiana

2 Cardiovascular Institute of the South, Lafayette, Louisiana

3 Cardiovascular Institute of the South, Opelousas, Louisiana

4 Cardiovascular Consultants, Bossier City, Louisiana

Background

- Critical limb ischemia (CLI) is characterized by a high incidence of chronic total occlusions (CTO) of infrainguinal vessels, especially infrapopliteal arteries. We report the 15-month experience of multiple centers with a novel CTO crossing device as “first-line therapy” in CLI. We theorized a center lumen CTO crossing would offer technical and clinical advantages over traditional subadventitial wire crossing facilitating treatment, optimizing all definitive interventional options, and potentially improving outcomes

Methods

- Between February 2008 and May 2009, 260 patients with 301 peripheral CTO's treated with The Crosser Catheter System (FlowCardia, Sunnyvale, CA) as "first-line therapy" were analyzed. Arteries treated included superficial femoral 127/301 (42.2%), popliteal 44/301 (14.6%), peroneal 35/301 (11.6%), anterior tibial 37/301 (12.3%), posterior tibial 40/301 (13.3%), iliac 14/301 (4.6%) and common femoral 4/301 (1.3%). In-stent occlusion were 52/301 (17.2%).

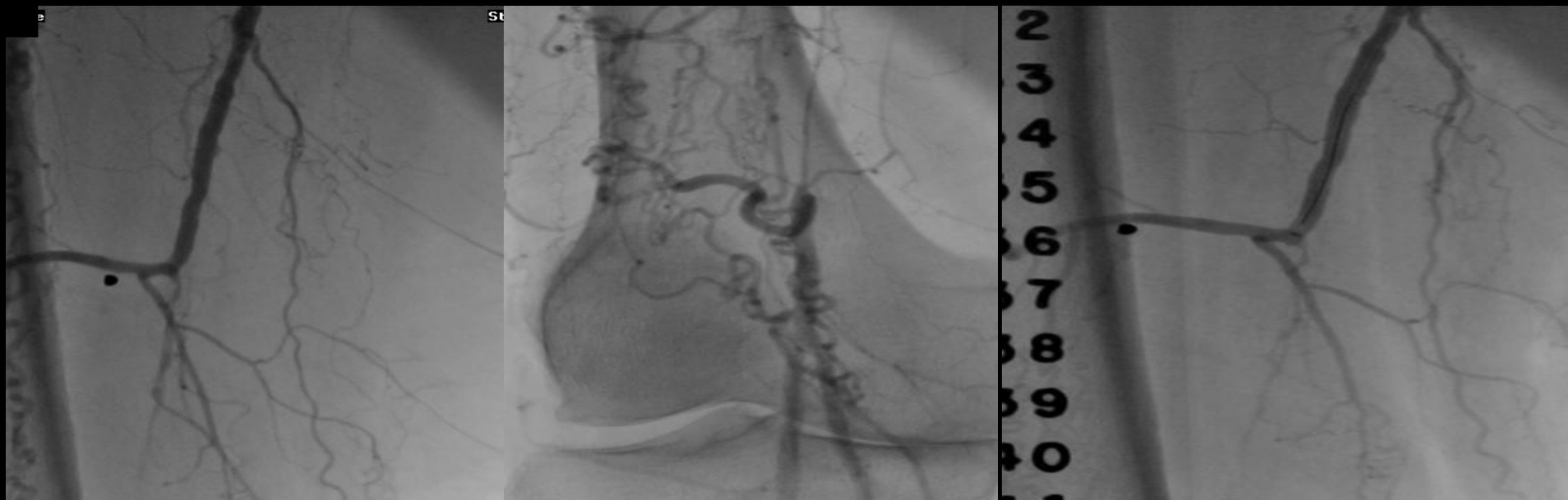
Results

- Device technical success was achieved in 254/301 (84.4%). There were no clinically relevant complications. The average CTO length was 220.5 ± 98.3 mm. The mean Crosser actuation time was 225 seconds (range 9-300). Crosser actuation time of < 30 seconds occurred in 65/301 (21.6%). The average case total fluoroscopic time = 24.5 ± 13.5 minutes (9-61.5) and total procedural time = 93 ± 31 minutes (27-186).

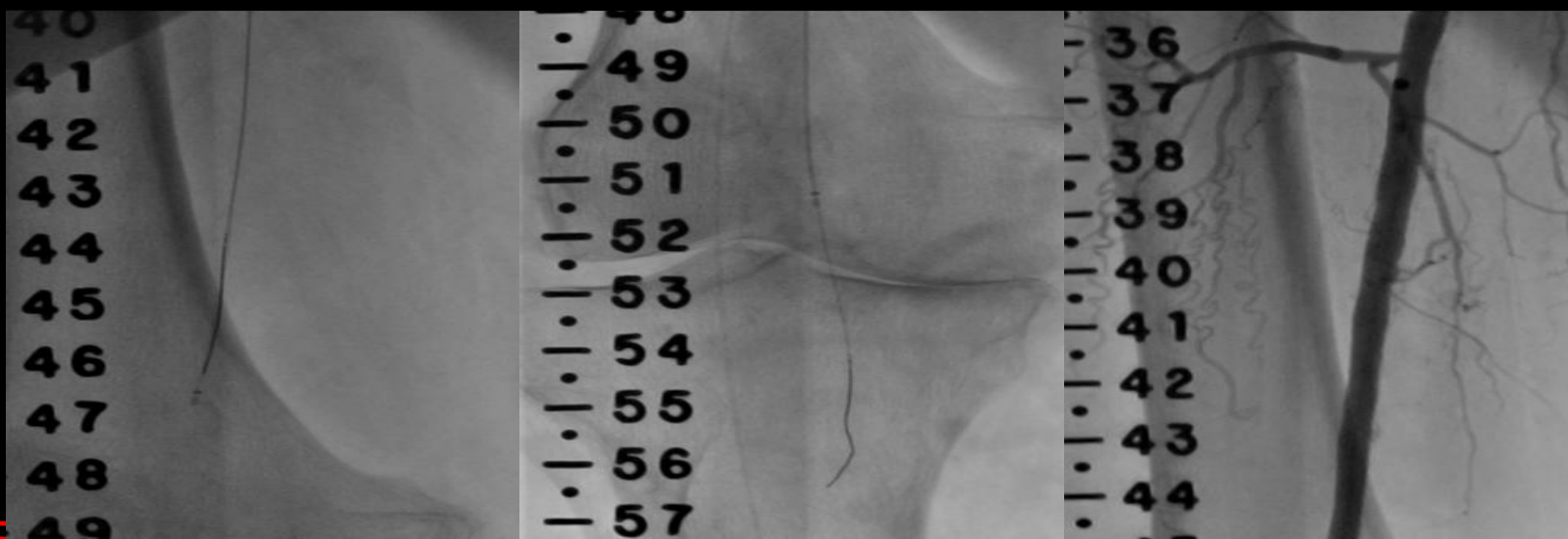
Conclusion

- The Crosser Catheter System was found to be safe and feasible during this Multi-Center Registry in treating patients with Peripheral CTO's. In these centers, The Crosser has become a "first-line therapy" in treating peripheral CTO's and has facilitated a CTO crossing strategy of center lumen crossing, improving success rates, decreasing procedural times and fluoroscopy times.

SFA CTO



Total Crossing Time – 2 min 20 secs



Heavily Calcified SFA CTO



Total Crossing Time – 3 min 15 secs



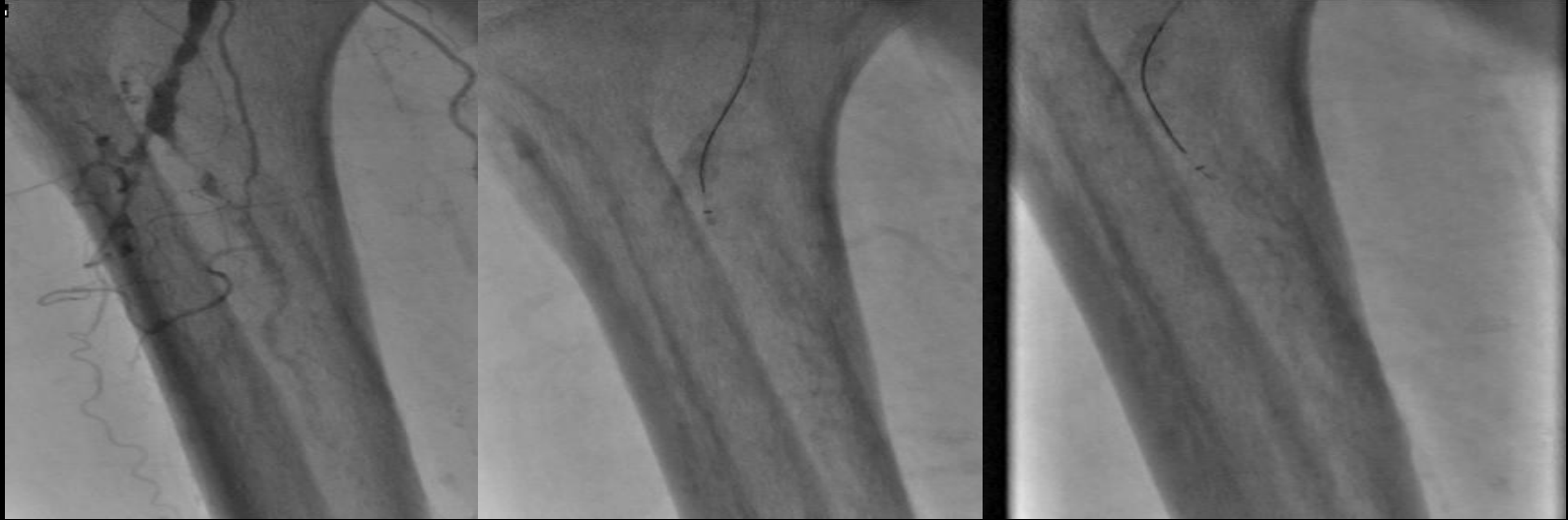
Popliteal CTO



Total Crossing Time –
42 Seconds



Posterior Tibial CTO



Total Crossing Time – 3 min 40 secs



Brachial CTO



Total Crossing Time – 1 min 42 secs

