Use of the Ocelot catheter in iliac chronic total occlusion intervention

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We read with interest the case series by Walters et al., [1] “Use of the Ocelot Catheter in Iliac Chronic Total Occlusion Intervention,” in this issue of Cardiovascular Revascularization Medicine. We congratulate the authors on a well-written manuscript describing use of the Ocelot catheter (Avinger Inc., Redwood City, CA) in the successful revascularization of 2 patients with common and external iliac chronic total occlusions (CTO) via retrograde and antegrade approaches, respectively.

While the catheter was only studied in CTOs within the infrainguinal vasculature, with a majority of cases involving superficial femoral artery CTOs, we agree with the authors that use of the Ocelot catheter is also a very feasible option for treatment of CTOs in the suprainguinal vasculature. We previously described 2 cases in which the Ocelot catheter was used to cross CTOs in the suprainguinal vasculature: a 79-year old male with a right common iliac artery CTO, and a 72-year old male with a left external iliac artery CTO, both treated via a retrograde approach [2,3]. Additionally, Salamat et al., [4] also previously described a case where bilateral iliac CTOs were crossed with use of the Ocelot catheter.

Blunt access is often necessary in hard, calcified CTOs, but increases the risk of arterial perforation. The real-time optical coherence tomography (OCT) imaging with the Ocelot catheter allows one to more easily navigate within the true lumen. However, like many products designed for CTOs, this catheter has limitations in crossing densely calcified plaques. This is illustrated by the fact that additional lesion cap modification was necessary in the 2 cases presented in the case series as well as the 2 cases we previously described [1–3]. The Ocelot catheter has an over-the-wire (OTW) system that allows the use of CTO wires to aid in catheter advancement through CTO lesions, while continuous OCT imaging helps minimize the risk of perforation.

In their first case, the authors used laser atherectomy and angioplasty in order to modify the distal cap prior to use of the Ocelot catheter. Blunt access with laser atherectomy increases the chances of perforation, which in the iliac position could result in rapid exsanguination. In cases like the authors’ where this is necessary, we believe the perforation risk could be mitigated with the use of the CrossLock™ (Radius Medical, Hudson, MA). The CrossLock™ is a support catheter that has an OTW elastomeric balloon that can be inflated from 1 to 8 mm in diameter. Balloons, stents, or laser catheter can be passed through the catheter with the balloon inflated. Aside from providing extra support, the CrossLock™ with its balloon inflated, centers the wire access in the lumen [5]. We believe use of a device like the CrossLock™ would have centered the laser catheter making it safer to modify the distal cap.

References