

1048 A successful case of calcified CTO lesion using retrograde approach after orbital atherectomy for donor artery.

A 69-year-old male with ischemic heart failure referred to our institution. Coronary angiography after heart failure improvement revealed that he has a long CTO lesion in the middle of right coronary artery (RCA), and intermediate stenotic lesion with severe calcification between left main trunk (LMT) and proximal left ascending artery (LAD), and the interventional collateral channels from 1st and 2nd septal branch to posterior descending. First, we performed the retrograde attempts via the 1st or 2nd major septal branch, but the micro-catheter couldn't be advanced at all due to severe calcification. Therefore, we decided to undergo the lesion preparation for proximal LAD using orbital atherectomy system (OAS). After atherectomy, the micro-catheter could pass the 2nd septal branch, and it was advanced to distal RCA successfully. After that, we transferred to antegrade preparation, and the reverse CART (controlled antegrade and retrograde subintimal tracking) technique succeeded at the proximal part of CTO lesion. After externalization, we deployed drug eluting stents, and obtain satisfactory revascularization. We could successfully complete the procedure without any complications. He was discharged 2 days after PCI.

Although OAS or rotational atherectomy (RA) are effective for device-crossability, we have a concern about debulking-procedure related complications including slow flow phenomenon, which leads to hemodynamic collapse especially in donor artery. Some reports showed that OAS had the lower incidence of vascular complication compared to RA. This is the reason why its smaller profile and the orbital rotation of eccentric crown might permit constant coronary perfusion during atherectomy. This present case suggests that OAS is a useful option for lesion preparation before retrograde attempt in a donor artery.