

## **Debulking Strategy:DCA vs.Rotablator**

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DCA (Directional Coronary Atherectomy), a debulking device that allows elective directional removal of plaque, was introduced to Japan about a decade ago. Treatment target was a focal lesion that is located in a relatively proximal area in a large vessel (> 3.0 mm) with no heavy calcification. DCA was not used frequently in the actual clinical practice due to the introduction of stents and a problem regarding the operability of the catheter. Furthermore, efficacy of DCA was not demonstrated in the clinical trial where it was compared to POBA. In later years, favorable results could be achieved with the usage of IVUS. Still, it is a fact that the device requires advanced technique as well as its usage is restricted due to the compatible guiding catheter being a thick 10 French size.

Meanwhile, Rotablator (High-Speed Rotational Atherectomy), another debulking device was introduced in Japan about three years ago. The device has a diamond tipped catheter burr which rotates at a high speed, crushing the plaque into minute pieces. Based on the principle called 'Differential Cutting', Rotablator aims to achieve smoother rather than larger lumen. Therefore, its treatment target is complex lesions such as heavily calcified or diffused, largely differs from that of DCA. Rather than setting against these two debulking devices created in pursuit of plaque reduction, combining Rotablator and DCA might improve procedural results as well as expand the indications. Issues regarding procedure, complication and costs might be relieved by using the newly introduced Flexi Cut as a bridge between conventional DCA and Rotablator. Flexi Cut has a titanium coated cutter, and is compatible with 8 Fr. guiding catheter. With Flexi Cut, debulking in more extensive target lesions is expected to become possible.