

Efficiency of Low-speed rotational atherectomy

Kimitsu Central Hospital, Japan

Norimasa Tonoike

Purpose:To calcified lesion, ablation with Rotablator is indispensable. But the procedure of rotational atherectomy is totally left to the discretion of the operators. Which is better, slow-continual motion or pecking motion, low rpm or high rpm?

Methods:In our hospital, Rotablator was proceeded mainly with high-speed rpm and with pecking motion (slow pecking). After polishing run with high-speed rpm as usual, we dare to ablate the lesion with the same burr with low-speed rpm. We evaluate the efficiency by IVUS image and the drop of rpm.

Result:During polishing run, No rpm drop and No resistance exist. But additional run with low-speed rpm and with slow motion shows another rpm drop (3000-10000 rpm); that is, supplemental ablation. IVUS showed more ablated images.

Conclusion:Atherectomy with Rotablator may be the most efficient under condition of Low-speed rpm and slow motion. But modification of the technique is not easy, may spoil the experience of the operator. If the operator uses Rotablator with high rpm and with pecking motion, addition ablation with low-speed rpm (with slow-continual) brings more efficiency with the same burr, doesn't spoil the experience and may save another type of rotawire (expect to wire-bias).