

Can scoring balloon catheter (scoreflex) substitute traditional rotational atherectomy for highly calcified lesion ?

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Rotational atherectomy (RA) is used for highly calcified lesion in percutaneous coronary intervention (PCI), but RA requires complicated procedure and is used in limited facilities. On the other hand, scoring balloon catheter can be used simply and widely in many hospitals. Therefore, we evaluated the efficacy of scoring balloon catheter in calcified lesion of coronary artery comparing with RA. From January 1998 to July 2012, 258 patients with highly calcified lesion of coronary artery were selected to undergo PCI. 96 patients were treated with RA and 164 patients were treated with scoring balloon catheter. Percent stenosis post PCI was compared between RA group and scoring balloon catheter group. Percent stenosis is defined as the difference between the minimal luminal diameter (MLD) from the target reference vessel diameter (RVD), divided by the RVD, and multiplied by 100 to get the percentage of stenosis. No significant differences of percent stenosis was shown between RA group and scoring balloon catheter group (9.8% versus 8.0%, $P=0.067$). The mean career of operator as interventionist was significantly younger in scoring balloon group (14.1 years versus 15.5 years, $P=0.023$). Use of scoring balloon catheter is not inferior RA in PCI to highly calcified lesion. Our findings suggest that scoring balloon catheter can be used for highly calcified lesion as a substitute for RA even for less experienced interventionist.