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Clinical and angiographic outcome after sirolimus-eluting stent implantation in aorto-ostial lesions
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OBJECTIVES: This observational study evaluated the clinical and angiographic outcomes of patients with aorto-ostial coronary artery disease treated with sirolimus-eluting stents (SESs) or with bare metal stents (BMSs). BACKGROUND: The safety and effectiveness of SESs for the treatment of aorto-ostial lesions have not been demonstrated. METHODS: We identified 82 consecutive patients who underwent percutaneous coronary interventions in 82 aorto-ostial lesions using the SES (32 patients) or BMS (50 patients) and compared the two groups of patients. The incidence of major adverse cardiac events (MACE), including death or Q-wave myocardial infarction (MI), target lesion revascularization (TLR), and target vessel revascularization (TVR), were recorded in-hospital and at a 10-month follow-up. RESULTS: All stents were implanted successfully. There were no statistically significant differences regarding major in-hospital complications between the two groups. At 10-month follow-up, two (6.3%) patients in the SES group and 14 (28%) patients in the BMS group underwent TLR ($p = 0.01$); MACE were less frequent in the SES group compared to the BMS group (19% vs. 44%, $p = 0.02$). Angiographic follow-up showed lower binary restenosis rates (11% vs. 51%, $p = 0.001$) and smaller late loss (0.21 +/- 0.31 mm vs. 2.06 +/- 1.37 mm, $p < 0.0001$) in the SES group. CONCLUSIONS: The main finding of our study is that, compared to the BMS, implantation of the SES in aorto-ostial lesions appears safe and effective, with no increase in major in-hospital complications and a significant improvement in restenosis and late event rates at 10-month follow-up.
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Randomized comparison of debulking followed by stenting versus stenting alone for ostial left anterior descending artery stenosis: intravascular ultrasound guidance
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BACKGROUND: Although directional coronary atherectomy (DCA) before stenting has the advantage of combining substantial removal of atheromatous plaque and prevention of elastic recoil, there has been no randomized study to investigate its efficacy in ostial left anterior descending artery (LAD) lesions. This study was aimed to evaluate the effect of DCA followed by stenting on ostial LAD stenosis under the guidance of intravascular ultrasound (IVUS). METHODS: Eighty-six patients with ostial LAD stenoses were randomly assigned to DCA followed by stenting (group I) or stenting alone (group II). Aggressive DCA or optimal stenting was performed in both groups under the guidance of IVUS. The primary end point was angiographic restenosis at 6 months. RESULTS: Baseline clinical and angiographic characteristics were similar between the 2 groups. The postprocedural minimal lumen diameter was larger in group I than group II (4.0 +/- 0.4 mm vs. 3.5 +/- 0.5 mm, $P < .001$). However, the angiographic restenosis rates were not significantly different between the 2 groups (9/32 [28.1%] in

group I vs. 11/30 [36.7%] in group II, P =.472). The postprocedural IVUS stent area was the only independent determinant of restenosis by multivariate analysis (odds ratio.61, 95% CI 0.41-0.92, P =.018). CONCLUSIONS: DCA followed by stenting achieved greater lumen gain than stenting alone for ostial LAD stenosis. However, DCA did not improve angiographic restenosis.
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Comparison of outcomes of percutaneous coronary intervention of ostial versus nonostial narrowing of the major epicardial coronary arteries
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Outcomes of percutaneous coronary intervention (PCI) of the ostia of the major epicardial coronary arteries in the modern era of stenting have not been clearly defined. We evaluated data from all PCIs performed from 1998 to 2001 in the proximal segments of the major epicardial coronary arteries entered into a large cardiac database and compared ostial with nonostial PCI outcomes. Of 2,484 patients who underwent PCI of a proximal coronary artery (left anterior descending, left circumflex, or right coronary), 223 patients had ostial narrowing and 2,261 patients had proximal, nonostial narrowing. Baseline characteristics were similar between the 2 groups, except that patients with ostial narrowing tended to be older and have shorter narrowings than did patients with nonostial narrowings. Stenting occurred in 89% of all patients and was similar in patients with ostial or nonostial narrowings. Procedural success was the same for ostial and nonostial PCI (96% vs 95%, p = 0.95). One-year event-free survival rate was lower in patients who underwent ostial PCI (69%