Conclusions: This study suggests that DES are associated with decreased long-term revascularization procedures when compared to VBT for the treatment of ISR. This benefit does not appear to be associated with a significant reduction in mortality or myocardial infarction.

TCT-662
Comparison Of Strategies To Treat Restenosis Of Second Generation Drug Eluting Stent
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Background: 2nd generation drug eluting stent (2nd DES) is known to be different from 1st generation drug eluting stent (1st DES) in various aspects. So the optimal strategy to treat in-stent restenosis of 2nd DES could be different from that of 1st DES. Although most of recent coronary intervention use 2nd DES, there seems to be no prior report focusing solely on this issue.

Methods: Among patients who received de novo PCI with 2nd DES between 2012 to 2013 in our hospital, there are 47 patients who encountered in-stent restenosis and also revascularized, and also received follow up coronary angiography 9 month after the revascularization, the strategy of which was at the operator’s discretion. We analyze the outcome of the 47 patients retrospectively. Among them, 10 (21%) was stent edge restenosis, 24 (51%) was focal in-stent restenosis, and 13 (28%) was diffuse in-stent restenosis. Plain Old Balloon Angioplasty (POBA) was applied to 18 (38%) patients, another DES was implanted to 29 (62%) patients.

Results: To focal in-stent restenosis, besides POBA therapy result in high re-restenosis rate, another DES implantation significantly reduced re-restenosis (0.61 vs 0.09, p<0.01). On the other hand, to diffuse in-stent restenosis, POBA and another DES implantation did not differ significantly, whose restenosis rates were 0.25 and 0.44, respectively (p=0.5). Overall, another DES implantation significantly reduced re-restenosis compared to POBA (0.56 vs 0.17, p<0.01).

Conclusions: Comparing POBA with another DES implantation as the therapy of 2nd DES restenosis, POBA results in higher re-restenosis rate compared to another DES implantation to focal type restenosis. But to diffuse type restenosis, POBA and another DES implantation do not differ significantly in their re-restenosis rates.

TCT-663
Cost Comparisons of Invasive and Non-Invasive Diagnostic Evaluation for Patients with Suspected In-Stent Restenosis Following Implant of Metallic Stents and Bioresorbable Scaffolds
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Background: Presentation with symptoms such as chest pain and angina following percutaneous coronary intervention (PCI) is not uncommon. These symptoms can be indicative of in-stent restenosis (ISR), with traditional diagnostic work-up consisting of invasive coronary angiography (ICA), non-invasive stress imaging, or coronary computed tomography angiography (CCTA). At present, the comparative costs of evaluation strategies by invasive vs. non-invasive methods remain unknown

Methods: We developed a decision analytic model to determine the 2-year costs for individuals undergoing PCI, measured by downstream costs per patient undergoing PCI with suspected ISR. Costs included testing for ICA and costs due to complications of testing using Medicare reimbursement rates for the United States. PCI was modeled for both metallic stents and bioresorbable scaffolds (BRS), with stents dichotomized as ≥ vs. < 3.0 mm in diameter. An invasive testing strategy consisting of direct referral to ICA was compared to 2 non-invasive strategies. Non-invasive diagnostic strategies included CCTA followed by ICA or stress testing by single photon emission computed tomography (SPECT) followed by ICA for abnormal or indeterminate results.

Results: The overall 2-year costs per patient were equivalent between individuals undergoing PCI with metallic stents and BRS for an ICA-based strategy (metallic stent: $1,547; BRS: $1,547) and slightly lower with BRS for a stress testing-based strategy (metallic stent: $1,221; BRS: $1,206). However, for a CCTA-based strategy, BRS was associated with lower costs than metallic stents in both > 3.0mm vessels (metallic stent: $1,133; BRS: $772) and ≥ 3.0mm vessels (metallic stent: $1,342; BRS: $431). Test-related complication rates for testing strategies ranged from 0.8% to 2.0%.

Conclusions: In individuals with suspected ISR after PCI, use of BRS with a downstream non-invasive evaluation strategy results in significantly lower costs than for metallic stents evaluated by either invasive or non-invasive methods. In particular, significant cost reductions occur when BRS is utilized for PCI and ICA evaluated by CCTA.
Abstract Withdrawn

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