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POSTER PRESENTATION

Routine Versus Deferred Percutaneous Coronary Intervention in Patients Undergoing Transcatheter Aortic Valve Implantation

A Time-to-Event Meta-Analysis With Reconstructed Individual Patient Data

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INTRODUCTION

Coronary artery disease (CAD) is present in up to 50% of patients undergoing transcatheter aortic valve implantation (TAVI). Whether routine percutaneous coronary intervention (PCI) before TAVI improves clinical outcomes remains controversial.

AIM

To compare routine PCI with a deferred, selective revascularization strategy using a time-to-event meta-analysis of randomized controlled trials (RCTs) with reconstructed individual patient data.

METHODS

Three RCTs (ACTIVATION, NOTION-3, and PRO-TAVI) included 1,156 patients with severe aortic stenosis and significant CAD undergoing TAVI.

Reconstructed individual patient data informed pooled Kaplan–Meier analyses. Hazard ratios (HRs) were pooled using a random-effects model.

Primary outcomes were all-cause mortality and major adverse cardiac and cerebrovascular events (MACCE).

Secondary outcomes included bleeding, urgent revascularization, myocardial infarction, and stroke.

KEY FINDINGS

Median age >81 years, with predominantly low anatomical CAD complexity.

Routine PCI did not significantly reduce all-cause mortality (HR 0.88, 95% CI 0.67–1.17) or MACCE (HR 0.84, 95% CI 0.62–1.13).

Reconstructed analysis showed no significant mortality difference over 48 months (HR 0.89, 95% CI 0.68–1.17).

Urgent revascularization decreased (HR 0.33), while bleeding increased (HR 1.96).

Myocardial infarction and stroke did not differ significantly.

RESULTS

Figure 1. Pooled clinical outcomes

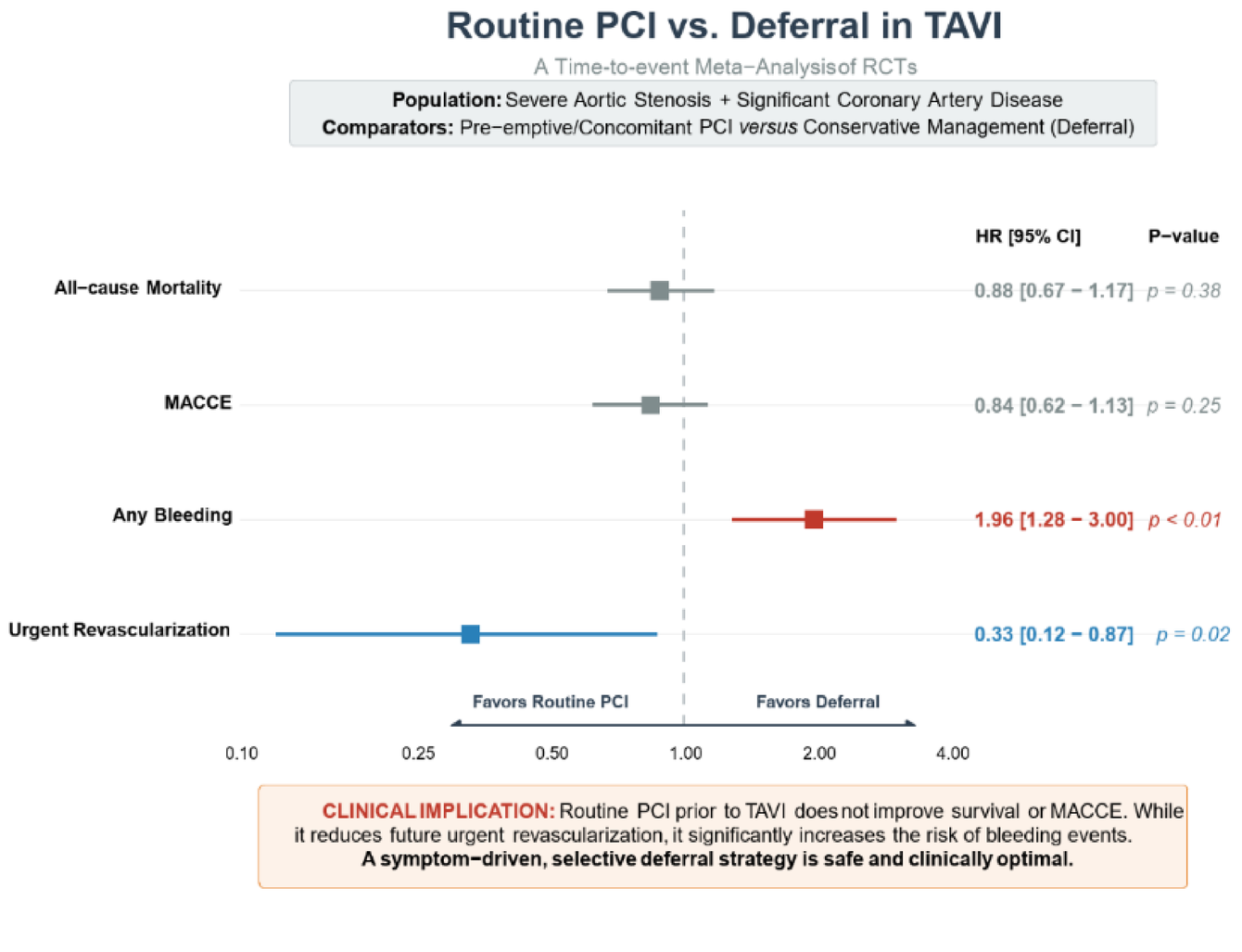


Figure 2. Reconstructed Kaplan–Meier analysis of all-cause mortality

CONCLUSIONS

Routine PCI before TAVI showed no significant survival or MACCE benefit compared with a deferred strategy. It reduced urgent revascularization but increased bleeding. These findings support a selective, symptom-driven approach to coronary revascularization in patients undergoing TAVI.

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