Percutaneous Coronary Intervention vs Coronary artery bypass graft in female patients with unprotected Left main disease: A Meta-Analysis

Introduction:
Percutaneous coronary intervention (PCI) has become a mainstay of treatment in patients with unprotected left main disease (ULMD) with low-intermediate SYNTAX score (0 to 32) and increased surgical risk. However, evidence supporting these recommendations is derived from RCT's with an underrepresentation of females. Hence, we performed a meta-analysis, comparing PCI and CABG in females with ULMD.

Methods:
PubMed, Embase and Cochrane databases were searched for all studies comparing PCI vs CABG in female patients with ULMD. The primary outcome was long term all-cause mortality. Secondary outcomes include myocardial infarction (MI), major adverse cardiac and cerebrovascular event (MACCE) and ischemia driven (ID) revascularization. Pooled odds ratios (OR) with their corresponding 95% confidence intervals (CIs) were calculated using the Mantel-Haenszel random-effects model.

Results:
4 studies met the inclusion criteria, with a total of 2344 patients (PCI group 1408, CABG group 936) and mean follow-up of 45 months. There was no significant difference in all-cause mortality between PCI and CABG group (OR 1.10 [0.56-2.14]; p=0.78). Although there was higher incidence of MACCE in PCI group, the difference was not statistically significant (OR 1.61 [1.00-2.59]; p=0.05). MI and ID revascularization rates were significantly higher in the PCI group than in CABG group. (OR 2.20 [1.30-3.73]; p=0.003) (OR 2.66 [1.60-4.44]; p=0.0002) [Figure 1]

Conclusion:
Although no significant difference all-cause mortality, females undergoing PCI for ULMD have significantly higher long-term MI and ID revascularization rates as compared to CABG. Thus, further evidence is warranted to further stratify revascularization strategies in females.
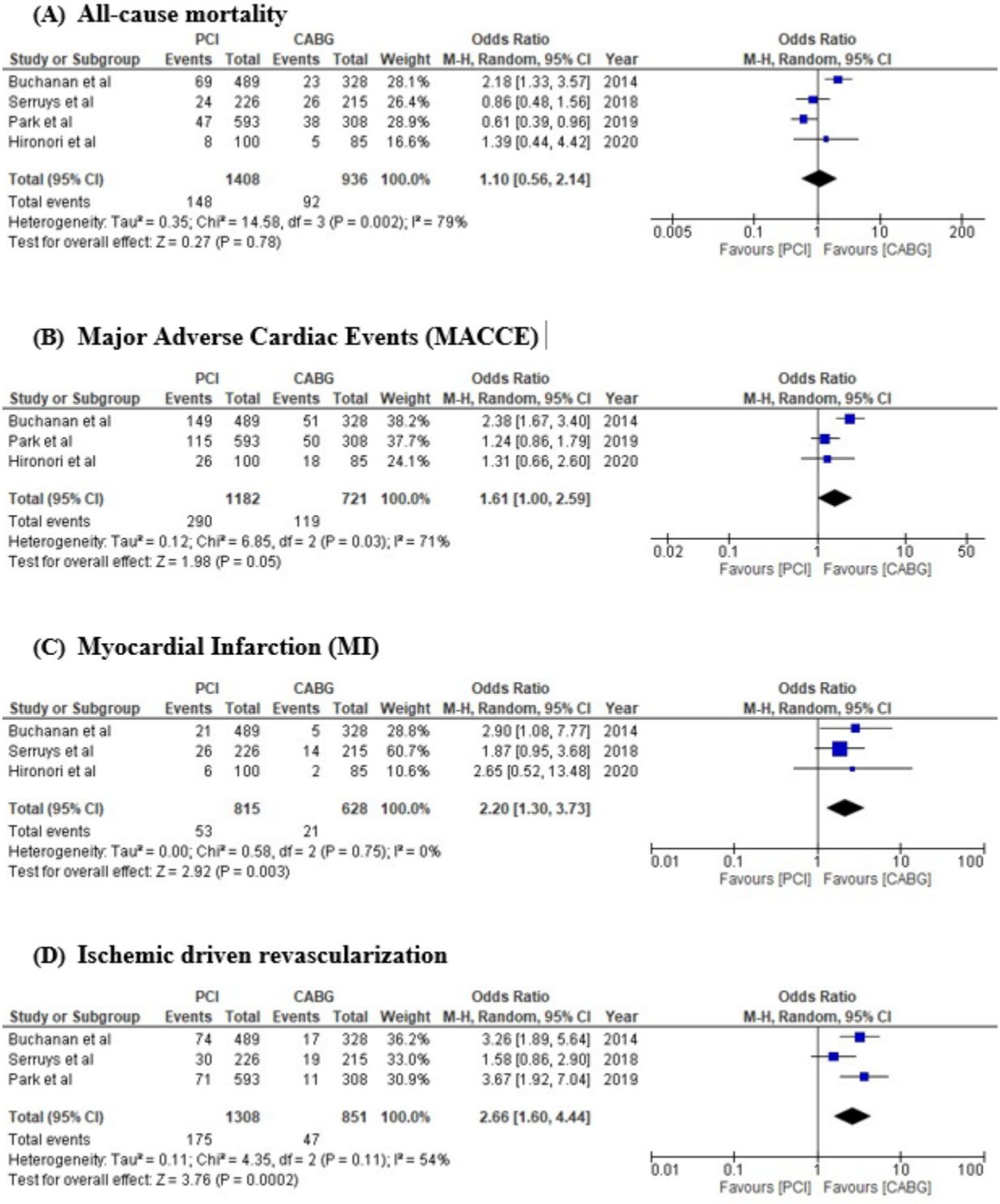
Figure 1: Forest plots of primary and secondary outcome