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787 Surgical Outcomes and Optimal Approach to Treatment of Aortic Valve Endocarditis with Aortic Root Abscess: Single-Centre Experience and Meta-Analysis

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Aim: To evaluate the impact of aortic root abscess (ARA) on the postoperative outcomes of surgically managed infective endocarditis (IE) and to inform optimal surgical approach.

Method: Between 2009 and 2020, 143 consecutive patients who underwent surgical management for aortic-valve IE were included in a retrospective cohort study. Multivariate and propensity-weighted analyses were used to adjust for demographic imbalances between those without (n=93; Group NARA) and with ARA (n=50; Group ARA). These results were then included in a meta-analysis of existing data, performed following a literature search of Medline, Embase and the Cochrane library. Additionally, empirical subgroup analysis appraised the two most used surgical techniques; Patch Reconstruction (PR) and aortic root replacement (ARR).

Results: In-hospital mortality was 8% and 12% in Group NARA and ARA, respectively (p=0.38).

Six clinical studies were included in the meta-analysis. Group ARA was associated with an increased risk of in-hospital mortality (OR=1.74 96% CI: 1.18–2.56) and late mortality (HR=1.27 95% CI: 1.03–1.58). Our reoperation meta-analysis had high levels of heterogeneity (I²=59%) and found no significant differences in reoperation between group ARA and NARA (HR=1.48; 95% CI: 0.92–2.40). However, inconsistent reoperation figures could be explained by varying institutional preferences for surgical approach as our propensity-weighted analysis suggested that ARR is associated with an advantageous preoperative profile compared with PR.

Conclusions: The presence of an ARA in aortic valve endocarditis is associated with elevated early and late mortality despite modern standards of care. Additionally, we contend that ARR should be considered as best practice for IE cases complicated by ARA.