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Clinical prognosis of pure right-sided infective endocarditis without association to cardiac devices or intravenous drug abuse

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Background: Pure right-sided infective endocarditis (RSIE) without association with cardiac devices or intravenous drug users (IVDUs) is an entity with unclear predisposing factors and prognosis.

Purpose: To evaluate predisposing factors and prognosis of pure RSIE compared to those associated to cardiac devices or IVDUs.

Methods: 280 consecutive patients with endocarditis were included retrospectively in a protocol of clinical and imaging follow-up. Endocarditis-related event was defined as endocarditis mortality or open-surgery requirement. Besides, a review and meta-analysis of the literature between January 2000 and December 2018 were performed.

Results: Fifty-two (19%) patients presented RSIE: 20 of them (39%) were pure RSIE. Intravascular catheters carriers (25% vs 3%; p=0.026) and congenital heart diseases (20% vs 0%; p=0.018) were associated to

pure RSIE. These patients demonstrated the worst clinical prognosis, with the highest in-hospital mortality (25% vs 3%; p=0.026) and endocarditis-related event rate (45% vs 6%; p=0.001), being pure RSIE independently associated with in-hospital endocarditis-related events (OR=8.40; 95% CI, 1.13–62.68; p=0.038). Four studies, including ours, with 315 participants diagnosed of RSIE were evaluated in meta-analysis: 94 individuals (30%) presented pure RSIE. This group demonstrated a higher in-hospital mortality than those with cardiac devices or IVDUs (RR=2.854; 95% CI, 1.640–4.965; P<0.001; I²=0.0%; Figure 1).

Conclusions: Pure RSIE is the worst prognosis group among RSIE with the highest endocarditis-related event rate and in-hospital mortality. This growing group should stake out the benign impression and recommendations given to RSIE among IE patients.

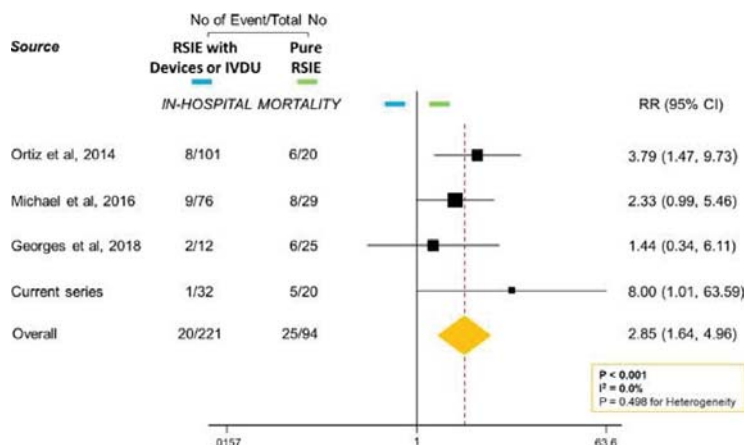


Figure 1. RSIE and in-hospital mortality based on groups: cases with pure RSIE versus those with cardiac devices or IVDUs.