A Study on the Safety of Performing Rotational Atherectomy (RA) without Upfront Temporary Transvenous Pacing (TTP) Compared to Upfront TTP

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Introduction: Bradycardia and heart block are common complications of rotational atherectomy (RA) often necessitating temporary transvenous pacing (TTP). We aimed to establish if RA is safe without up-front TTP.

Methods: Consecutive patients undergoing percutaneous coronary intervention from a tertiary teaching hospital were entered into a registry with procedural, in-hospital and 30-day outcomes prospectively obtained. Further RA data was retrospectively collected regarding procedural up-front TTP, bradycardia and chronotropic stimulants. Patients without up-front TTP were compared to patients with up-front TTP.

The primary endpoint was intraprocedural hypotension (systolic BP drop to ≤90 during RA), isotropic or chronotropic pharmacological support and urgent intraprocedural TTP. Secondary outcomes included intraprocedural bradycardic events and TTP-related complications.

Results: RA was used in 129 patients with up-front TTP in 17.1% (22/129). There was no significant difference between up-front versus no-upfront TTP patients in the primary endpoint (27.2% versus 33.6%, p=0.74). Need for intraprocedural pharmacological support (9.1% versus 17.8%, p=0.49), intraprocedural hypotension (14.9% versus 15%, p=0.74). Bradycardic events were frequent in patients without upfront TTP, including 4.7% (5/107) ventricular standstills, 4.7% (5/107) 3rd degree HB and 5 (4.7%) 2nd degree HB. Urgent intraprocedural TTP was required in 0.9% (1/107).

Conclusion: Upfront TTP did not significantly reduce events of haemodynamic instability during RA. While brady- cardic events were frequent in patients without upfront TTP, pharmacological chronotropic support appeared sufficient to maintain haemodynamic stability.

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A Systematic Review and Meta-analysis on Epidemiology, Angiographic Variants and Outcomes in Spontaneous Coronary Artery Dissection

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Background: Spontaneous Coronary Artery Dissection (SCAD) is an elusive but increasingly recognised cause of Acute Coronary Syndrome (ACS), particularly among females. Most knowledge about SCAD has arisen from small to medium sized cohort studies that have been published since 2012.

Purpose: This systematic review and meta-analysis aimed to provide an update on SCAD’s association with cardiovascular risk factors, angiographic variants and outcomes.

Methods: The term “Spontaneous Coronary Artery Dissection” was searched in PubMed, EMBASE and SCOPUS on the 2nd of February 2019, yielding a total of 1517 articles. Following exclusion, 31 original studies that reported at least one desired parameter in patients with SCAD were included. Statistical analysis was performed independently for each parameter using random mixed effects models.

Results: Of the k = 31 studies (n = 77/025 patients), only 3 were published before 2012 (n = 68). Mean age was 62.4 years and 85.1% [78.9%–89.8%, I2 = 91.7%] were female. Importantly, only 37.4% [30.0%–45.4%, I2 = 77.0, k = 10] were associated with a traditional Type 1 angiographic appearance. Yearly incidence was 3.4% [2.4%–4.4%, I2 = 73.4%] for SCAD recurrence and 5.8% [4.1%–7.5%, I2 = 85.7%] for MACE. Incidence of MACE at follow-up was 4.1% [1.7%–9.9%, I2 = 74.0%] for conservative treatment and 7.2% [5.1%–10.3%, I2 = 43.7%] for PCI (p=0.14).

Conclusions: This meta-analysis reveals a small but important risk of recurrence and MACE. Furthermore, a majority of SCAD cases present with non-traditional angiographic appearances highlighting the need for increased familiarity with this condition among treating interventionalists.

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A Systematic Review of Transcatheter Mitral Valve-in-valve Replacement for Failed Prosthesis

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Transcatheter mitral valve-in-valve (TMVIV) for failed bioprosthetic valves is an emerging alternative to surgical re-