Real world experience with coronary sinus reducer implantation for the treatment of refractory angina: a single-centre experience

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Funding Acknowledgement: Type of funding sources: None.

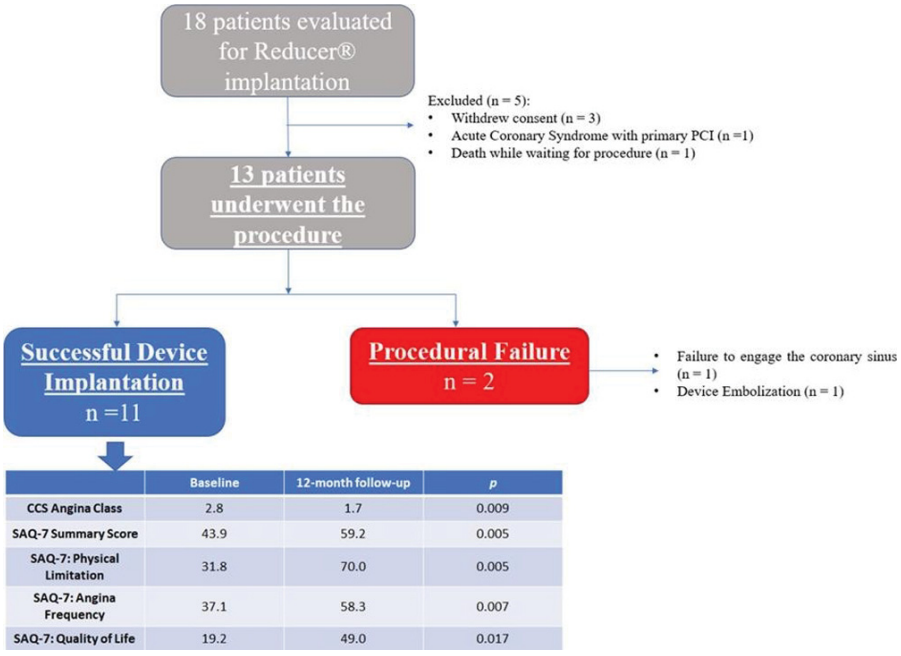
Background: Coronary sinus Reducer device (CSF) implantation is a novel therapeutic option to relieve symptoms in patients with refractory angina (RA). There is limited real-world data describing its use outside of clinical trials.

Aim: To assess the safety and efficacy of this procedure in a real-world setting.

Methods: This is a report of a single centre prospective registry of consecutive patients with RA (CCS II-IV) deemed unsuitable for revascularization. Between May 2017 and August 2019, 17 patients were referred to CSF implantation. Baseline and follow-up evaluation consisted of clinical assessment, including completion of the short version of the Seattle Angina Questionnaire (SAQ-7) and CCS class evaluation and objective evaluation by transthoracic echocardiography and cardiopulmonary exercise test (CPET).

Results: A total of 13 patients (70,6±6,5 years, 76,9% male) underwent CSF implantation with a procedural success of 84.6%. No cases of periprocedural serious adverse events were reported. At 12-month follow-up, any reduction in CCS Class was achieved in 72.7% of cases, with 27.2% reducing 2 CCS classes. Baseline CCS score was reduced from 2.8±0.4 to 1.7±0.8 (p=0.009). Quality of life (QoL) was significantly improved as assessed by the improvement seen in all items of SAQ-7 ($p<0.017$ for all). CPET duration was significantly increased (p=0.034), but no change was noted in the remainder CPET variables. During follow-up, 3 patients suffered myocardial infarction, resulting in 1 death.

Conclusion: CSF implantation in patients with RA was safe and led to a significant reduction of the angina burden and improvement of QoL at 12-month follow-up.



	Baseline	12-month follow-up	*p*
CCS Angina Class	2.8	1.7	0.009
SAQ-7 Summary Score	43.9	59.2	0.005
SAQ-7: Physical Limitation	31.8	70.0	0.005
SAQ-7: Angina Frequency	37.1	58.3	0.007
SAQ-7: Quality of Life	19.2	49.0	0.017