

Review of: "Intravascular Lithotripsy in Calcified Coronary Lesions: A Single-Center Experience in “Real-World” Patients"

Samin Sharma

Potential competing interests: The author(s) declared that no potential competing interests exist.

Intravascular Lithotripsy (IVL) has been proven of its safety and efficacy by the Disrupt CAD I-IV trials. The two papers by Kereiakes et al. (JACC Cardiovasc Interv 2021;14:1337) and Liang et al. (Front Cardiovasc Med 2021;8:724481), summarized the results of the Disrupt CAD I-IV trials.

The paper by Kereiakes et al., is the largest patient-pooled data analysis from the 4 Disrupt CAD studies of IVL treatment in *de novo*, severely calcified coronary arteries to facilitate and optimize target lesion preparation prior to stent implantation. Major findings of this analysis show the safety of IVL use before stent implantation having relatively low in-hospital and 30-day MACE rates in complex target lesions undergoing PCI and effectively having a high procedural success rates of treatment effect across subgroups analyzed. It was also learned that with prior MI, bifurcation target lesion, and longer lesion length relatively increased MACE rates and lower procedural success rates.

The paper by Liang et al., evaluated the safety and efficacy of IVL in treating severely calcified coronary stenoses. Despite the early learning curves of IVL use in multiple operators and complex lesions and vessels treated, IVL is found to be safe and efficient for severely calcified stenoses with IVL facilitating calcium fracture increasing vessel compliance and favorable stent expansion. The core and outlook on long-term prognosis of patients with severe calcification impacts this technology. Mainly, the advantage of IVL use over the other methods in this particular patient group is still unknown. Feasibly this technology will replace other coronary calcification therapies and by then have a safe, efficient and simple treatment method for severe calcific lesions.

The manuscript, Intravascular Lithotripsy in Calcified Coronary Lesions: A Single-Center Experience in “Real World” Patient, authored by Mastrangelo et al., was very well written with a thorough research done and citing several appropriate papers related to the study. This paper supports the findings of the Disrupt CAD I-IV trials.