Interventions in severely calcified coronary stenoses: lithotripsy or rotablation

- Matija Vrbanić*,
- ©Kristijana Radić,
- ©Ljiljana Švađumović,
- Vlatka Funduk,
- Darko Navoj,
- ®Biljana Šego,
- ©Zoran Marić,
- Marina Budetić,
- Mirela Adamović,
- Olvica Benko,
- ©Irzal Hadžibegović

University Hospital Dubrava, Zagreb, Croatia **KEYWORDS:** calcium, coronary artery disease, rotablation, intravascular lithotripsy.

CITATION: Cardiol Croat. 2023;18(3-4):66. | https://doi.org/10.15836/ccar2023.66

*ADDRESS FOR CORRESPONDENCE: Matija Vrbanić, Klinička bolnica Dubrava, Avenija Gojka Šuška 6, HR-10000 Zagreb, Croatia. / Phone: +385-91-2112-007 / E-mail: matija.vrbanic23@gmail.com

ORCID: Matija Vrbanić, https://orcid.org/0000-0002-3229-9436 • Biljana Šego, https://orcid.org/0000-0002-0806-1233 Ljiljana Švađumović, https://orcid.org/0000-0002-9068-2716 • Zoran Marić, https://orcid.org/0000-0002-9121-4631 Vlatka Funduk, https://orcid.org/0000-0001-7070-188X • Kristijana Radić, https://orcid.org/0000-0002-6098-254X Darko Navoj, https://orcid.org/0000-0001-8899-6524 • Mirela Adamović, https://orcid.org/0000-0003-4922-7436 Marina Budetić, https://orcid.org/0000-0002-1165-7097 • Ivica Benko, https://orcid.org/0000-0002-1878-0880 Irzal Hadžibegović, https://orcid.org/0000-0002-3768-9134

Severely calcified coronary lesions represent up to 30-40 % of all coronary stenoses, and bring greater risk of complications and recurrent events. Materials like non-compliant balloon, scoring and superhigh pressure balloons, together with debulking devices (rotablation and intravascular lithotripsy) are essential in calcium management. Despite the availability of several plaque modification devices, their rates of use remain low despite the prevalence of the coronary artery calcium encountered in clinical practice. Percutaneous coronary intervention (PCI) in a severely calcified coronary artery is often complex and requires knowledge of materials and methods. Patients with severely calcified lesions are older, more fragile and with more comorbidities and have a harder time tolerating more complex procedures. It is important to understand how each device can be utilized in clinical practice to improve outcomes after PCI. We will present the problems encountered during PCI in severely calcified coronary artery stenoses. We will refer to the guidelines, methods and algorithm of procedures when using rotablation and intravascular lithotripsy in our Cath Lab.

RECEIVED: February 18, 2023 ACCEPTED: February 22, 2023



- Burke L, Graham JJ. Percutaneous management of calcified coronary arteries review of atherectomy and lithotripsy devices and why it is important. Curr Opin Cardiol. 2021 Sep 1;36(5):630-636. https://doi.org/10.1097/HC0.0000000000000871
- Brinton TJ, Ali ZA, Hill JM, Meredith IT, Maehara A, Illindala U, et al. Feasibility of Shockwave Coronary Intravascular Lithotripsy for the Treatment of Calcified Coronary Stenoses. Circulation. 2019 Feb 5;139(6):834-836. https://doi.org/10.1161/CIRCULATIONAHA.118.036531