

Left main stenosis: how do we treat it?

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Aim: To evaluate clinical, interventional and outcome data of patients treated for left main (LM) stenosis.

Patients and Methods: Study was conducted in University Hospital Centre „Sestre milosrdnice“, Zagreb. We retrospectively analyzed all coronary angiographies from June 20, 2017 until February 12, 2020. Cases were identified by a nation-wide database (Stenos). Patients with percutaneous coronary intervention (PCI) involving LM were analyzed, regardless of Medina stenosis class.

Results: Out of 5537 procedures (3255 interventions, 1775 non-elective), 400 procedures involved LM stenosis. PCI was performed in 235 patients. In 25 cases LM interventions were protected (excluded from further analysis). Centre yearly LM volume was 79.7, average operator LM volume was 9.9/year. Male sex was predominant (72.4%), average age was 68.6±10.3. Total of 63.8% patients presented with acute coronary syndrome (elevation 16.7%, non-elevation 33.3%, unstable angina 13.8%). Ad-hoc PCI was performed in 70.0% of cases. Stenoses involved LM in 92.4%, ostial left anterior descending artery in 59.5%, ostial circumflex artery in 44.3% patients. Bifurcation was stented in 80.5%, while 2 or more stents were used in 20.5% of all cases. Dominant bifurcation technique was provisional stenting (74.6%), followed by T and protrusion (15.4%). Proximal optimization (POT) was performed in 96.4%, which was followed by kissing in 34.7%, or strut dilatation in 10.3%, and re-POT in 57.8% of eligible patients. Intravascular ultrasound (IVUS) was used in 16.7%, coronary flow physiology in 1.4% patients. Radial access was most commonly used (83.1%; 58.6% right-sided), followed by femoral (14.9%, right-sided in 84.6%). Shock was present in 7.3% on admission, while 9.6% of the patients were resuscitated. Mechanical circulatory support (MCS) was used in 1.4%. Two patients (0.9%) required emergent surgery. In-hospital mortality was 6.2%. Follow-up was available for 75.7% patients (294 [100-474] days). Major adverse cardiovascular event was observed in 7.0% patients.

Conclusion: Patient preferences, operator and centre experience, and availability of cardiac surgery impacts the decision to interventional treat LM stenosis.¹ Acute presentation, radial access, ad-hoc procedures, and simple stenting technics predominate. IVUS and MCS are still underutilized.

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LITERATURE

1. Xu B, Bettinger N, Yang Y, Qiao S, Wu Y, Guan C, et al. TCT-484 Impact of Left Main Percutaneous Coronary Intervention Operator's Experience and Volume on Outcomes after Left Main Percutaneous Coronary Intervention (PCI): Insight from a Cohort of 1,948 Patients. *J Am Coll Cardiol.* 2015 Oct;66 (15 Supplement):B198. <https://doi.org/10.1016/j.jacc.2015.08.500>