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## Left Main Stenting by different techniques- Advantages over one another under IVUS imaging guidance

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It is estimated that 5–7 percent of individuals who undergo CAG have significant unprotected (LMCAD), with more than 80 percent of these patients suffering from bifurcation. When it comes to revascularization, coronary artery bypass surgery (CABG) is still the best option for people with unprotected coronary artery disease. Left Main (LM) is a common candidate for percutaneous coronary intervention (PCI) because of its anatomic accessibility and relatively big artery size. Interventional cardiologists have been inspired to pursue PCI because of major technological advancements in PCI, as well as more recent drug-eluting stents (DESs). Although PCI has a greater occurrence of recurrent revascularization than CABG, there is no difference in the overall incidence of major adverse cardiovascular events between the two procedures, according to randomised clinical trials (RCTs). When tried to compare to LM bifurcations, PCI of the ostial and mid-shaft has shown good results with lower mortality and long-term complications. LM bifurcation has not been studied in RCTs, hence the best stenting method is unknown. Two-stent procedures are more prevalent than temporary one-stent treatments for complicated LM bifurcation lesions. At the Beginning of the 21st Century, LM stenting has become the alternative to Surgery in selected Centres. We calculate 10 years syntax score of the patient and heart team considerations are taken. IVUS guidance can be used for LM PCI and can be very helpful for planning PCI strategy (1 or 2 stents), plaque preparation (assessment of calcification), device sizing (Predilatation balloon sizing, stent sizing, POT balloon sizing), optimizing results (adequate stent expansion and full lesion coverage, complete stent apposition, stent edge (dissection, plaque burden) stent deformation (proximal edge). Lesion preparation can be done by characterization of plaque, specifically location and extension of calcification and selection of the most adequate device. While using the Bifurcation Technique in distal LM lesions the provisional Stenting strategy is the most common approach. If required, the Type of the 2-stent technique is decided on the anatomy of the bifurcation and the preference of the operator. Preferences of the 2-stent Technique are no small LCX with any of the following like Significant and long lesion in Ostium, Complex

lesion in Ostial LCX and Narrow-angle LAD-LCX. If there is poor result after Provisional stenting is Stenosis >75%, Reduced Flow and Dissection then we can go for second stent.

### Important highlights are:

- The multilayered Provisional strategy remains the treatment of choice for Left Main Bifurcation Lesions.
- In Provisional stenting the Second stent can be deployed as and when required
- There is a considerable role of IVUS Imaging and Physiology in optimizing the results and improving outcomes
- Culotte's technique can be used as a provisional stent strategy double kissing Culotte should be the preferred technique
- In Patients who present with ACS, SKS is still a viable technique. It is especially useful if the Caliber of Left Main is too large and branches of LAD and LCX are disproportionately small.

### Take Home Message:

1. The advantages of DK crush techniques are theoretically 1) complete SB lesion coverage and 2) better SB stent struts opening at the ostium.
2. Favourable clinical outcomes have been reported, comparing other 2-stent techniques or even provisional strategy.
3. However, the technique is basically complex including 9 steps, and there are some technical pitfalls.
4. SB stent crush could be frequently insufficient, resulting in unfavourable stent results.
5. Intravascular imaging guidance is mandatory at each step of the procedure.

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### Biography

**Dr. Rohit Mody** did his MBBS from Govt. Medical College, Patiala; MD from Jaipur University; DM from Kanpur University. Post DM, Dr. Mody has more than 20 years of experience in interventional cardiology. He worked post DM in [institute of cardiovascular diseases](#) in Madras medical mission Chennai. He also worked in Beunos Aires, Argentina on stem cell therapy in myocardial infarction. He worked in Tokyo, Japan on chronic total occlusions. He is an accomplished cardiologist. He has done more than 4000 Angioplasties. His main interest is in Primary PCI & PCI in ACS. Also,

valvotomies, peripheral angioplasties, device closures, pacemaker devices and stent grafts for aneurysm dissections. He is working in recent advances in cardiology on Imaging Vulnerable Plaque, Stem Cell Therapy and Nanotechnology in Cardiovascular Drugs and Diseases. He is presently working as director cardiology, Max Hospital, Bathinda. He is invited faculty to various leading conferences of the world. He is author of 2 chapters of a book published by Elsevier and Springer and also a member of Cardiology Society of India.

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