

How to Optimize? Aspect of OCT Believer

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Intracoronary imaging devices such as intravascular ultrasound (IVUS), optical coherence tomography (OCT), angiography and Nir-spectroscopy add significant more detailed information to what is provided by angiography alone, thereby improving the understanding of and our capacity to interpret angiographic images. Recently data showing the clinical superiority of coronary intervention with OCT-guided PCI are published.

CLI-OPCI, ILUMIEN I study and ILUMIEN II study showed clinical usage and some superiority in terms of soft end points.

Among them, The DOCTORS (Does Optical Coherence Tomography Optimize Results of Stenting?) randomized trial is milestone study with an investigator-driven initiative, support by central analyses performed at the leading participating center, and funded by the French government. DOCTORS is the first, randomized, multicenter study specifically evaluating the impact of combined angiographic and OCT imaging on PCI optimization. The study confirms prior observational or retrospective studies in identifying OCT findings that jeopardize the immediate PCI result, namely stent underexpansion, strut malapposition, edge dissection, or most often, combinations of the above.

The important part of this study is the primary outcome of this study (The primary end point was the functional result of PCI assessed by the measure of post PCI fractional flow reserve all about optimization of the immediate PCI result). Thus all efficacy and safety end points are focusing on procedure-related outcomes. Of note, event rates for clinical outcomes at 6 months are extremely low in both groups.

These results suggest that there may be a role for OCT as a complement to fluoroscopy for the guidance of PCI procedures in non-ST-segment elevation acute coronary syndromes.

We need to gather more data about clinical end points before considering incorporating OCT guidance for standard use in patients with acute coronary syndromes.