



PCI Randomised Trial in Chronic Total Occlusion



Results of a multicentre trial show a high success rate and low procedural risk in using percutaneous coronary intervention (PCI) for the treatment of chronic total occlusion. The findings of the first European randomised trial of PCI vs. optimised medical therapy in chronic total occlusion were presented in EuroPCR 2017, the official annual meeting of the European Association for Percutaneous Cardiovascular Interventions (EAPCI).

The EURO-CTO trial randomised 396 patients from 26 centres on a 2:1 basis to PCI or optimal medical therapy. Optimal medical therapy comprised standard secondary prevention medications plus anti-anginal drugs, including beta-blockers, nitrates, calcium antagonists and others, primarily ranolazine. Half of the patients had single vessel CTOs and 30 percent had a non-CTO lesion treated before randomisation. Nine patients randomised to optimal medical therapy crossed over to PCI during follow-up.

The chronic total occlusion was successfully opened in 86.3 percent of patients treated with PCI. Aside from the high procedural success rate with PCI, there was low procedural risk: i.e., no procedural deaths and the overall 12-month major adverse cardiac and cerebrovascular events (MACCE) rate was 0.4 percent (3 cases of tamponade, 1 stroke, 2 vascular repair).

Further, improvement in clinical symptoms was more pronounced in patients treated with PCI than with optimal medical therapy, based on the Seattle Angina Questionnaire (SAQ) subscales of physical limitation and angina frequency. The PCI group also showed a trend to improved quality of life and significantly greater absolute freedom from angina.

"The clinical symptoms and well-being of patients with chronic total occlusion improve more efficiently with PCI than with optimal medical therapy. PCI should be the primary treatment option for these patients," said lead author Gerald Werner, Professor of Cardiology and Director of the Cardiology Department at Klinikum Darmstadt, Darmstadt, Germany.

Chronic total occlusion occurs in around 20 percent of patients with stable coronary artery disease but accounts for only 7 percent of patients undergoing PCI. The discrepancy can be explained in part by the fact that current guidelines for managing stable coronary artery disease do not accept a CTO as an indication to perform PCI, in contrast to non-occlusive lesions. As Prof. Werner pointed out, "This study should lead to reconsideration of this assessment. In fact, there is no study that would prove that a CTO lesion is benign compared to a non-CTO lesion, so why should they be treated differently?"

Source: [PCR](#)

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