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When chronic total occlusions remain closed: how well is the treatment rationale documented?

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Introduction: A substantial proportion of chronic total occlusions (CTOs) in patients with chronic coronary syndrome (CCS) remain unrevascularized. Clinical decision-making incorporates assessment of symptoms, ischemia and myocardial viability, alongside Heart Team discussion where appropriate.[1-3] However, the extent to which the rationale for non-revascularization is documented in routine clinical practice remains unclear.

Patients and Methods: We analyzed a single-centre registry of consecutive patients with angiographically confirmed CTO (TIMI 0 flow and an estimated duration of at least 3 months) who underwent index coronary angiography at University Hospital Dubrava, Zagreb, between September 2022 and October 2026. Available source documentation, including catheterization reports, discharge letters and outpatient notes, was reviewed for each patient. Among patients with CCS whose CTO remained unrevascularized following the final index treatment decision, we assessed the documented rationale for non-revascularization, recorded Heart Team decisions, ischemia testing before the decision and formal viability assessment. Categorical data are presented as counts and percentages, with Wilson 95% confidence intervals (CI) where reported; age is presented as median and interquartile range (IQR).

Results: Of 309 patients with CCS, 162 had an unrevascularized CTO (52%; 95% CI 47–58). Their median age was 70 years (IQR 64–75), and 22% were women. Recorded reasons for non-revascularization included non-viability or unfavorable anatomy in 39 patients (24%), absence of symptoms or ischemia in 28 (17%), comorbidities or frailty in 22 (14%), technical infeasibility in 13 (8%), patient refusal in 6 (4%) and adequate collateralization in 6 (4%). In 43 patients (27%; 95% CI 20–34), no clear rationale for non-revascularization was documented. A Heart Team decision was recorded in 32 patients (20%). Ischemia testing before the decision was documented in 66 (41%) and viability assessment in 49 (30%); at least one functional assessment was documented in 80 patients (49%).

Conclusion: In this cohort, more than one quarter of patients with unrevascularized CTOs lacked a documented rationale for non-revascularization. Functional assessment and Heart Team decisions were inconsistently documented. These findings support standardized recording of reasoning, functional assessment and multidisciplinary input to improve the transparency of decisions regarding CTO management in patients with chronic coronary syndrome.

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