Common practice of underreporting and downplaying adverse events in patients undergoing percutaneous coronary intervention of chronic total occlusions. Time for accountability. Inerta is not an option with duties of cardiology journals to educate physicians

Mohammad Reza Movahed¹

¹Affiliation not available

December 14, 2023

Mohammad Reza Movahed,1,2

- 1. Department of Medicine, University of Arizona Sarver Heart Center, Tucson, AZ1
- 2. Department of Medicine, University of Arizona, Phoenix, Phoenix, AZ 2

Correspondence to:

Mohammad Reza Movahed, MD, PhD

Clinical Professor of Medicine

University of Arizona Sarver Heat Center

1501 North Campbell Avenue

Tucson, AZ 85710

Email: rmova@aol.com

Tel: 949 400 0091

Kev words:

Chronic total occlusion; percutaneous coronary intervention; angioplasty; CTO; stenting; stent, coronary artery disease, atherosclerosis; intervention

Conflict of interest: None,

Letter to Editor:

With great interest, I read the manuscript entitled: "The Retrograde Approach to Chronic Total Occlusion (CTO) Percutaneous Coronary Interventions: Technical Analysis and Procedural Outcomes." (1) that was published in JACC Cardiovascular Intervention. The authors unfortunately underreported true major adverse cardiac events (MACE). They describe an MACE of 3.5% even though coronary perforation alone occurred in 5.8% of their cases. It is not clear why such an important adverse event is not included in the MACE. Due to the enormous negative impact of coronary perforations occurring during percutaneous coronary interventions (PCI), in every institution, it will trigger immediate peer review from the hospital peer review committee like death. Furthermore, any single perforation will raise troponin so their procedural

myocardial infarction rate should be at least 5.8% which should raise the MACE rate much higher than the reported MACE rate of 3.5%. There are now plenty of studies showing no improvement in mortality in patients undergoing CTO never improves with CTO intervention and other soft points are also in question (2-4). We have published the largest CTO outcome data involving 259,574 CTO interventions showing higher all-cause inpatient mortality and complications in patients undergoing CTO PCI compared to other PCIs. (5) The CTO cohort had a 3.17% mortality rate in comparison to a mortality rate of 2.57% of other PCIs. (OR:1.24; CI]: 1.18-1.31; P < .001). Compared to other PCIs, all postprocedural complications were more than 3 times higher in CTO PCI patients. Therefore, there should be a word of caution and CTO PCI should only be performed in a patient with resistant limiting angina despite maximal medical therapy and is aware that CTO PCI does not improve long-term mortality and that PCI CTO is a high-risk procedure. We recently alerted physicians about this problem. (6) Being inertia is not an option and we need Journals like JACC intervention to be more active in this regard. We need accountability for too many unnecessary CTO PCIs that are being performed leading to great harm. (7)

References:

- 1. Allana SS, Kostantinis S, Rempakos A, Simsek B, Karacsonyi J, Alexandrou M, Choi JW, Alaswad K, Krestyaninov O, Khelimskii D, Gorgulu S, Davies R, Benton S, Karmpaliotis D, Jaffer FA, Khatri JJ, Poommipanit P, Azzalini L, Kearney K, Chandwaney R, Nicholson W, Jaber W, Rinfret S, Frizzell J, Patel T, Jefferson B, Aygul N, Rangan BV, Brilakis ES. The Retrograde Approach to Chronic Total Occlusion Percutaneous Coronary Interventions: Technical Analysis and Procedural Outcomes. JACC Cardiovasc Interv. 2023 Nov 27;16(22):2748-2762.1.
- 2. Boden WE, O'Rourke RA, Teo KK, Maron DJ, Hartigan PM, Sedlis SP, Dada M, Labedi M, Spertus JA, Kostuk WJ, Berman DS, Shaw LJ, Chaitman BR, Mancini GB, Weintraub WS; COURAGE Trial Investigators Impact of optimal medical therapy with or without Percutaneous coronary intervention on long-term cardiovascular end points in patients with stable coronary artery disease (from the COURAGE Trial). Am J Cardiol. 2009:1;104(1):1-4.
- 3. Stergiopoulos K, Boden WE, Hartigan P, Möbius-Winkler S, Hambrecht R, Hueb W, Hardison RM, Abbott JD, Brown DL. Percutaneous coronary intervention outcomes in patients with stable obstructive coronary artery disease and myocardial ischemia: a collaborative meta-analysis of contemporary randomized clinical trials. JAMA Intern Med. 2014 Feb 1;174(2):232-40
- 4. Kim MH, Mitsudo K, Jin CD, Kim TH, Cho YR, Park JS, Park K, Park TH, Serebruany V. Long-term clinical outcomes after successful and failed recanalization to native chronic Total occlusion: Insights from the Busan chronic Total occlusion (B-CTO) Registry. Cardiovasc Revasc Med. 2016 Jun;17(4):229-32.
- 5. Nathan, Allistair et al. "Percutaneous Coronary Intervention of Chronic Total Occlusion Associated with Higher Inpatient Mortality and Complications Compared With Non-CTO Lesions." The American journal of medicine vol. 136,10 (2023): 994-999.
- 6. Movahed MR. Significant Downplay and Underreporting of Adverse Events in Patients Who Underwent Percutaneous Coronary Intervention of Chronic Total Occlusions. Am J Cardiol. 2023, 210;317
- 7. Movahed MR. It is time to have better oversite and accountability in performing too many not indicated percutaneous coronary interventions in patients with chronic total occlusions. Int J Cardiol. 2019 Mar 1;278:38-39.