

## Letters to the Editor

### Reply to Dan et al.—Follow-up of Successful Chronic Total Occlusion Percutaneous Coronary Intervention: To Cath or Not to Cath?



#### To the Editor:

We thank Dan et al. for their interest in our report on the acute and long-term outcomes of patients with vs without chronic kidney disease (CKD) undergoing chronic total occlusion (CTO) percutaneous coronary intervention (PCI).<sup>1</sup>

Data from large randomized trials in all-comers with multivessel coronary artery disease (CAD) showed that, although patients with CKD undergoing revascularization are at increased risk for long-term adverse events compared with patients who do not have CKD, this is mostly driven by death rather than by myocardial infarction or the need for ischemia-driven revascularization.<sup>2</sup> In keeping with these data, we also found an increased rate of all-cause death at 24 months (11.2% vs 2.7%,  $P < 0.001$ ) in patients with CKD undergoing CTO PCI, whereas target-vessel myocardial infarction (0.6% vs 0.7%,  $P = 0.87$ ) and target-lesion revascularization (6.2% vs 8.8%,  $P = 0.26$ ) were similar compared with patients who do not have CKD.<sup>1</sup> Taken together, these data suggest that patients with CKD are at higher risk for cardiac and noncardiac mortality, which might be mediated mostly by nonischemic events such as end-stage renal disease, heart failure, and malignant arrhythmias.

Accordingly, current guidelines do not advocate systematic angiographic follow-up of patients undergoing complex (eg, CTO) PCI.<sup>3</sup> In fact, the Rescue Angiography vs Conservative Treatment or Repeat Thrombolysis (REACT) trial showed no clinical benefits with routine angiographic follow-up after PCI, and early coronary revascularization rates were increased.<sup>4</sup> An approach based on noninvasive imaging might be more appealing in view of these findings and other considerations including the potential hazards associated with exposure to contrast media during follow-up coronary angiography (particularly in patients with CKD) as well as the increased health care costs associated with this strategy.

This recommendation is not limited to the subgroup of patients with CKD undergoing CTO PCI; it applies reasonably to all patients with aggressive CAD undergoing complex

PCI (eg, CTO recanalization, multivessel stenting, rotational atherectomy). In the absence of a randomized trial specifically evaluating the benefits of systematic angiographic follow-up of patients undergoing successful CTO PCI, common sense and good clinical judgement seem to have the strongest indication.

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#### Disclosures

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