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Letter to the Editor

Letter to the Editor: Should diuresis remain a diagnostic criterion for surgery associated acute kidney injury? Revisiting the role of perioperative oliguria

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The recently published article by de Moura Pedro et al., entitled "Should diuresis remain a diagnostic criterion for surgery-associated acute kidney injury? Revisiting the role of perioperative oliguria", offers a valuable and thought-provoking perspective. However, several points merit further discussion, particularly concerning the role of oliguria as a diagnostic criterion for acute kidney injury (AKI) in the postoperative setting [1].Multiple studies have demonstrated an association between oliguria and increased perioperative mortality, underscoring the clinical relevance of urine output as a prognostic parameter that should neither be overlooked nor underreported [2,3]. In an effort to address this issue, Priyanka et al. conducted a retrospective cohort study involving 6637 patients who underwent cardiac surgery across five hospitals within a regional healthcare system [4]. The investigators evaluated the incidence of cardiac surgery-associated acute kidney injury (CSA-AKI) using both urine output and serum creatinine (SCr) as defined by the KDIGO classification—separately and in combination. They also assessed the occurrence of major adverse kidney events at 180 days postoperatively (MAKE 180). When both KDIGO criteria were applied, the overall incidence of CSA-AKI was 81.2 %, with 20.5 % of patients classified as stage 1, 48.7 % as stage 2, and 12 % as stage 3. Notably, isolated oliguria was observed in 43 % of patients, among whom 28 % met criteria for stage 2 injury. Unexpectedly, isolated oliguria was independently associated with a twofold increased risk of persistent renal dysfunction at 180 days, even for patients classified as stage 1 (odds ratio, 2.01; $P = .003$). This association had not been clearly established in previous literature.Moreover, patients with more advanced AKI according to urine output criteria exhibited poorer MAKE180 outcomes and decreased six-month survival, even when SCr-based staging indicated a less severe injury. These findings highlight that isolated oliguria in the immediate postoperative period following cardiac surgery should not be considered benign. In light of this evidence, we urge clinicians not to disregard reduced urine output as an isolated finding, particularly in the context of cardiac surgery, as it may be predictive of adverse renal outcomes and compromised long-term survival.

In conclusion, isolated urine output remains a critical diagnostic component of CSA-AKI. Its presence is potentially associated with significant clinical consequences, including persistent renal impairment and reduced survival, and should therefore be integrated into perioperative risk assessment and patient management strategies.

Author's contribution

NDL, PMH designed the paper. All authors participated in drafting and reviewing. All authors read and approved the final version of the manuscript.

CRediT authorship contribution statement

Nathan De Lissnyder: Conceptualization, Writing – original draft, Writing – review & editing. **Ilann Oueslati:** Writing – original draft, Writing – review & editing. **Sydney Blackman:** Writing – original draft, Writing – review & editing. **Maryam Erraji Chahid:** Writing – original draft, Writing – review & editing. **Sarah Dahma:** Writing – original draft, Writing – review & editing. **Yasser Benkaddour:** Writing – original draft, Writing – review & editing. **Patrick M. Honore:** Conceptualization, Supervision, Writing – original draft, Writing – review & editing.

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Declaration of competing interest

The authors declare to have no competing interests.

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