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INTERVENTIONAL RADIOLOGY

LETTER TO THE EDITOR

Reply: Routine desmopressin before non-focal renal biopsy: is the evidence sufficient?

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Dear Editor,

We thank the authors for their thoughtful comments regarding routine desmopressin (DDAVP) administration before non-focal renal biopsy (NFRB).[1] We agree that our retrospective before-and-after design is susceptible to temporal confounding, a limitation acknowledged in the manuscript. However, biopsy technique, blood pressure management, coaxial access, and tract embolization practices remained standardized throughout the study period, reducing the likelihood that procedural variation alone explains observed findings.

The authors emphasize the small number of clinically significant hemorrhagic events, reflecting a broader challenge in studying serious outcomes most relevant to patients and clinicians. Hospitalization, angiographic intervention, and major bleeding are uncommon, making individual studies underpowered to detect differences. No clinically significant hemorrhages occurred in the DDAVP group, whereas six occurred in the non-DDAVP group. Although not definitive, this represents a meaningful signal that warrants consideration.

We believe the totality of evidence extends beyond the systematic review cited in the letter. A landmark double-blind randomized trial demonstrated a significant reduction in post-biopsy bleeding with DDAVP [13.7% vs. 30.5%; relative risk (RR): 0.45; $P = 0.01$], accompanied by smaller hematomas and shorter hospital stays.[2] More recently, a randomized placebo-controlled trial showed significant reductions in both overall bleeding and perirenal hematoma formation.[3] A meta-analysis reported that DDAVP was associated with a significant reduction in bleeding complications after excluding an outlier study (RR: 0.56; 95% confidence interval: 0.39–0.80), with Bayesian analysis demonstrating a high probability of benefit.[4] Although another meta-analysis did not demonstrate a significant reduction in major bleeding, the authors found a reduction in overall bleeding events, underscoring the need for additional studies rather than evidence of harm or futility.[5]

We agree that tract embolization may have contributed to the low overall complication rate in our cohort. However, because tract embolization was performed uniformly in both groups, the observed difference in clinically significant hemorrhage is unlikely to be attributable to embolization alone and may suggest an additive benefit from DDAVP.

Regarding safety, our study was not powered to evaluate rare thromboembolic events. Nevertheless, broader evidence remains reassuring. A Cochrane review including 1,984 participants found no significant increase in thrombotic events with DDAVP,[6] although hyponatremia remains an important consideration requiring monitoring.[4]

We agree that larger multicenter randomized trials focused on clinically significant bleeding endpoints are needed. However, we respectfully suggest that our findings should be interpreted within the context of multiple randomized trials, meta-analyses, and observational studies, including work demonstrating benefit in higher-risk populations.[7] Taken together, available evidence supports DDAVP as a low-risk intervention with the potential to reduce bleeding complications following NFRB.

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Footnotes

Conflict of interest disclosure

Dr. Deipolyi is a paid consultant for Boston Scientific, Inc. and Varian Medical.

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