



Challenges associated with percutaneous nephrostomy in infants

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Dear Editor,

We read with great interest and commend Taydaş et al.¹ for their detailed description of their experience with percutaneous nephrostomies (PCN) in neonates and infants (<1 year of age). The authors have contributed to the literature by examining the feasibility, safety, and efficacy of imaging-guided PCN in infants over a period of 20 years. Taydaş et al.¹ reported a 100% technical success and low major complication rates. In this single-center trial, 75 infants underwent PCN for various underlying pathologies, such as ureteropelvic junction obstruction, ureterovesical junction obstruction and others. We would like to raise questions regarding the specifics of this trial to potentially enhance the interpretation and further applicability of its results.

First, both fluoroscopic and sonographic guidance were implemented for the nephrostomy insertions. Reports on the radiation dose information are of great interest for any interventional radiology procedure, such as a PCN, especially given the very young age of this cohort and the ramifications it can have later in life. We believe that this would have enriched the current study, as the authors already recognise.² As with all trials of procedural techniques, patient safety is paramount and should take precedence.

Second, Taydaş et al.¹ found a low occurrence of major complications and no perioperative/postoperative sepsis, hemorrhage, or vascular/bowel injury. The number of patients in this single-center trial is low (n = 75), and reporting the outcomes of a larger cohort might be beneficial to drawing more concrete conclusions associated with a higher statistical power. Cyphers et al.³ reported a 2.3% incidence of urosepsis and a 18.6% incidence of urinary tract infections in 46 cases; hence, they concluded that infection constitutes a challenge of PCN placement in infants and neonates.

Third, some key details needed to fully evaluate this study are missing, including the specific timeframe of the conducted follow-up. Taydaş et al.¹ assessed serum creatinine levels and the presence of hydronephrosis at 3-month intervals. However, the total duration of the follow-up has been omitted. In addition, as far as the underlying pathology necessitating PCN is concerned, the authors reported the outcomes, along with the clinical and laboratory findings, of a quite heterogeneous cohort. Hence, given the variability in underlying pathologies (e.g., ureteropelvic junction obstruction, ureterovesical junction obstruction, and vesicoureteral reflux), examining and reporting the long-term outcomes might be more beneficial to drawing conclusions regarding the safety and efficacy of PCN in infants.

Fourth, the experience of the operators has not been included in the paper. This constitutes a key detail that would allow for a complete appraisal of their technical success and a low prevalence of complications. Lee et al.⁴ demonstrated that the operator's level of experience can influence the occurrence of complications.

We would like to congratulate Taydaş et al.¹ for contributing to the literature, expounding their methodology and evaluating PCN in infants. However, we believe their findings should be interpreted cautiously considering the issues highlighted here.¹ We welcome Taydaş et al.'s¹ next work and eagerly await the results of further research on this very interesting topic.

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