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LETTERS TO THE EDITOR

Re: Bhageria A, Nayak B, Seth A, Dogra PN, Kumar R. Pediatric percutaneous nephrolithotomy: Single-centre 10-year experience. J Pediatr Urol 2013;9:472–5



We read the paper of Bagheria et al. with interest [1]. The authors reported their 10 years of experience of percutaneous nephrolithotomy (PCNL) in children. Although the authors analyzed their database retrospectively in order to determine the patient characteristics and treatment outcomes, the efficacy and safety of this procedure in the pediatric population is already established [2,3]. Moreover, several pitfalls of the study must be addressed.

First of all, the authors included 102 PCNL procedures during a 10-year period (approximately 10 procedures per year). Furthermore, they used adult instruments for a pediatric population. Although the authors claimed that the use of adult-sized nephroscopes in children allows faster stone clearance with no additional complications, there are many papers which demonstrate smaller instrument size does not significantly increase the operative time, and it is associated with lower complication rates [3,4]. Today, recent guidelines consistently recommend performing pediatric PCNL at high-volume centers where small caliber instruments are available in order to reduce the complications [5]. Unfortunately, the authors' center does not seem to meet these criteria, thus their results should be evaluated with caution.

Not performing metabolic evaluation and stone analysis properly for the patients in this age group is also problematic, considering the high incidence of pediatric metabolic disorders. Metabolic evaluation of a stone patient should be performed at least 3 weeks after complete clearance of stones in the collecting system. Performing the analysis before the stone treatment, as the authors did, does not provide any clinical benefit [5]. The authors reported that six cases had clinically insignificant residual stone fragments; however, they omit to mention that the term clinically insignificant residual fragment is controversial in the pediatric age group as this group of patients are all in the high-risk group for stone recurrence [5]. Finally, the authors did not provide their data as mean \pm SD of stone size, which would give the readers more insight

regarding the average stone burden of the study population.

In our opinion, pediatric patients with kidney stones should be managed with special care considering the anatomical and metabolic differences in this age group. Instead of reporting the results of retrospective cohorts, researchers must focus on developing techniques and equipment to reduce the morbidity of stone removal surgeries as well as establishing treatment modalities to prevent the development of stones.

Conflict of interest

None.

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None.

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Response to 'Re: Paediatric percutaneous nephrolithotomy: Single-centre 10-year experience. J Pediatr Urol. 2013 Aug; 9(4):472–5'



We thank the readers for their critique of our paper. Unfortunately, their criticisms seem more emotional than factual. They seem to take umbrage at our use of adult equipment, "small" numbers, retrospective data, and lack of being a "centre of excellence".

We are not sure how they define "centre of excellence" or "high-volume centre". Our data, obtained from 102 percutaneous nephrolithotomies (PCNL) in children, are among the larger series in the literature. A quick search on Pubmed using the term "pediatric PCNL" revealed only two articles with more cases than ours from 2010 to 2013. The readers use the 2007 study by Bilen et al. [1] and the 2008 study by Ozden et al. [2] to support the argument that small instruments do not increase operative time and cause fewer complications. Bilen et al. [1] (retrospective, 49 procedures) state that the complication rates did not differ between their three groups, and they do not compare operative times at all! The transfusion rate was actually lower in the 26-Fr group (13%) than the 20-Fr group (27%). Ozden et al. [2] (retrospective, 51 patients) noted a 17% overall transfusion rate with no difference between the small or large tracts. Their study does not mention tract size-related complication rates nor does it compare operative times. Similarly, the other study referred to by the readers (Desai et al. [3]) does not report operative times or tract size-related complication rates at all.

The readers quote the European Association of Urology (EAU) guidelines [4] to state that "recent guidelines insistently recommend performing pediatric PCNL at high volume centers where small caliber instruments are available in order to reduce the complications". We could not find any such statement or even such an implication in the said guidelines. On the contrary, the guidelines state that "benefits of such miniaturised instruments remain controversial".

We accept our limitations in terms of performing a metabolic evaluation, and have stated as much in the article. A limited baseline metabolic evaluation was performed in all patients. We would expect that performing the analyses with the stone in situ is likely to have higher false-positive than false-negative results; we found none. Our patients pay out-of-pocket for treatment, travel large distances to reach us, and are loathe to return for follow-up

unless there is a complication. Expecting them to return after 3 weeks for an elective metabolic evaluation is not realistic.

Residual fragments are a fact of stone management. We have not reported these as "successes". The EAU guidelines [4] state that children pass stone fragments more easily than adults, and whether these 3–4 mm residual fragments in children are significant or not has not been proven. All patients selected for PCNL had a stone of >2 cm in the largest dimension. The exact stone surface area was not available from the records and thus could not be reported.

Finally, we agree with the readers about the need for special care in managing these patients. It is speculative that smaller instruments cause fewer complications, but we have no arguments against their use. Our article simply describes our experience and we had success and complications not much different from published data using small or standard instruments. However, we disagree that studies such as ours serve no purpose. It is not possible to "focus on developing techniques and equipment to reduce the morbidity of stone removal surgeries as well as establishing treatment modalities to prevent the development of stones" without recording outcomes of current modalities and identifying the gaps in our knowledge.

References

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