

To the Editors

## **Radiological profile of children under 2 years of age from South India with urinary tract infection**

*Sri Lanka Journal of Child Health*, 2017; **46**(1): 97-98

DOI: <http://dx.doi.org/10.4038/sljch.v46i1.8171>

(Key words: Cystitis, pyelonephritis, vesico-ureteric reflux, renal anomalies)

We read with much interest the above article by Piduru P et al.<sup>1</sup> published in the September 2016 issue of your journal. While commending the authors for their endeavour we would like to make the following comments, clarification to which would benefit the general readers of the journal:

1. Aim of the study is “To assess the proportion of children less than 2 years of age with urinary tract infection (UTI) having ‘structural anomalies’....”. But results discuss children with cystitis, pyelonephritis, urolithiasis and vesico-ureteric reflux (VUR), which are not ‘structural anomalies’ of urinary tract. Cystitis and pyelonephritis denote the type of infection (upper vs. lower urinary tract) and VUR is an important predisposing factor for UTI.
2. There is no mention about the diagnostic criteria used to define the principal diagnosis findings such as cystitis, pyelonephritis, and VUR diagnosed by ultrasonography (USG).
3. Authors mention that “Urine for cultures were collected by different methods depending on age and technical feasibility i.e. midstream clean catch, catheter sample, suprapubic aspiration”. But obtaining a ‘clean catch midstream urine’ sample is almost impossible in the studied population, i.e. children less than 2 years. Therefore, it is recommended to obtain the urine sample by urethral catheterization or supra-pubic aspiration<sup>2</sup>.
4. It is mentioned that “Children who had undergone operative procedures and catheterisation of urinary tract were excluded from the study” but the authors did not mention whether the studied children had previous history of UTI or received prophylaxis for recurrent UTI. This is of special importance as these children would form a special population and are expected to have a higher chance of having renal anatomical and functional abnormalities; therefore, the data collected from them would not be applicable to the general population.
5. The authors studied 206 children with urine culture positive UTI but they did not provide the data of isolated organism and their antibiotic sensitivity pattern. This would have certainly

contributed to the existing knowledge and helped in formulating local antibiotic policy.

### **References**

1. Piduru P, Reddy MP, Reddy RMS, *et al.*. Radiological profile of children under 2 years of age from South India with urinary tract infection. *Sri Lanka Journal of Child Health*; **2016**; **45**(3):169-71. <https://doi.org/10.4038/sljch.v45i3.8006>
2. Subcommittee on Urinary Tract Infection, Steering Committee on Quality Improvement and Management, Roberts KB. Urinary tract infection: clinical practice guideline for the diagnosis and management of the initial UTI in febrile infants and children 2 to 24 months. *Pediatrics* 2011; **128**(3):595-610. <https://doi.org/10.1542/peds.2011-1330> PMID: 21873693

\*Anirban Mandal<sup>1</sup>, Puneet Kaur Sahi<sup>2</sup>

<sup>1</sup>Consultant, Department of Paediatrics, Sitaram Bhartia Institute of Science and Research, New Delhi, India, <sup>2</sup>Senior Resident, Department of Paediatrics, Kalawati Saran Children's Hospital, New Delhi, India

\*Correspondence: [anirban.nrs@gmail.com](mailto:anirban.nrs@gmail.com)

### **Response by authors of article**

To the Editor,

We thank the reader for his comment and for providing us an opportunity for further discussion about the controversies in the article. We agree very well that cystitis and pyelonephritis are the types of urinary tract infection (UTI). Even though these are not structural anomalies, we observed the significant findings of USG in cystitis as bladder wall thickening with internal echoes and focal or diffuse kidney enlargement as well as abnormal cortical echogenicity to diagnose pyelonephritis; hence it mentioned<sup>1</sup>. The criteria used to diagnose vesico-ureteric reflux (VUR) in ultrasonography (USG) are dilated ureters and pelvis which are confirmed by voiding cystourethrography (VCUG). Regarding

collection of urine sample for culture, it is very well accepted that consensus states midstream urine collection for toilet trained children only. We allowed a few parents to collect by same in small group of children of age above 15 months where parental consent is an issue for catheterization and suprapubic aspiration. Surprisingly, in our study there were no children on chemoprophylaxis prior to study to include or exclude. Urine culture of subjects showed E.coli is the common organism sensitive to third generation cephalosporins, aminoglycosides which is similar to what is mentioned in the literature.

## References

1. American Academy of Paediatrics, Committee on Quality Improvement, Subcommittee on Urinary Tract Infection. Practice Parameter: The diagnosis, treatment and evaluation of the initial urinary tract infection in febrile infants and young children. *Journal of Pediatrics* 1999; **103**: 843-52.

**\*Pratima Piduru<sup>1</sup>, M Panchala Reddy<sup>2</sup>, Raja M Sekhar Reddy<sup>3</sup>, M Vijaya Lakshmi<sup>2</sup>**

<sup>1</sup>Assistant Professor, Department of Paediatric Nephrology, <sup>2</sup>Assistant Professor, Department of Pathology, <sup>3</sup>Senior Resident, Narayana Medical College, Nellore, Andhra Pradesh, India

\*Correspondence: pratimaneph2007@rediffmail.com