1. Reply to Article: Ultrasound as a Screening Test for Genitourinary Anomalies in Children with a UTI

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Re: "Ultrasound as a Screening Test for Genitourinary Anomalies in Children With UTI"

To the Editor,

We read with interest the recent article by Nelson and colleagues titled 'Ultrasound as a Screening Test for Genitourinary Anomalies in Children with a UTI' [1]. In light of the recently revised AAP guidelines [2], the authors audit the accuracy of ultrasound (US) as a screening tool for genitourinary abnormalities, and conclude that ultrasound is unreliable and voiding cystourethrography (VCUG) provides additional, complimentary information not obtained from US. Although this study was large and included 2259 patients, there are limitations to the data that require cautious interpretation.

The use of radiology reports for analysis do not allow for standardisation of findings; inconsistencies in individual reports can occur and are influenced by a number of factors, including seniority of radiology staff and clinical information provided. It has been shown that there is significant inter- and intra-individual variability in radiology reporting, ranging from 5–23% [4]. A further study with blinded re-reporting of renal ultrasound images would be beneficial.

The classification of US findings used in the study was somewhat arbitrary. Although there is a widely used grading scale for hydronephrosis [3], we are not aware of published data to support the grading of US abnormalities used in this study. Without the use of a standardised classification it is difficult to interpret the accuracy of the grading system and its ability to predict the results of the VCUG.

Finally, the inclusion of those children who had a renal US within 5 days of diagnosis of their urinary tract infection (UTI) potentially biases the results. The authors took a 10% random sample of their study population to assess the mean time from UTI to imaging. This small sample size may underestimate the total number of patient who had a renal US done during the acute infection. Given that bacterial endotoxins may cause renal tract dilatation during an acute episode this is a potential confounder. [2]

Given the above limitations, the results of this study should not influence current AAP guidelines. Furthermore, given that interventions have been ineffectual in preventing long term renal impairment, early diagnosis of VUR is not required in all children.

References:


**Conflict of Interest:**

None declared

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