Arch Pediatr Infect Dis. 2017 January; 5(1):e40932. doi: 10.5812/pedinfect.40932.

Published online 2016 August 29. **Letter**

A Letter to the Editors: Urinary Ghrelin Concentration in Children with Urinary Tract Infection

Anirban Mandal,[1,*] and Puneet Kaur Sahi[2]

[1]Department of Pediatrics, Sitaram Bhartia Institute of Science and Research, New Delhi, India

[2]Department of Pediatrics, Kalawati Saran Children's Hospital, New Delhi, India

[*]*Corresponding author*: Anirban Mandal, Department of Pediatrics, Sitaram Bhartia Institute of Science and Research, New Delhi, India. Tel: +91-8826836670, E-mail: anirban.nrs@gmail.com

Received 2016 July 19; **Accepted** 2016 August 03.

Keywords: Urinary Tract Infection, Urinary Ghrelin, Children

Dear Editor,

We read with great interest the original article by Sharifian et al. (1) in the recent issue of your journal. First, we would like to commend the authors for their endeavors; at the same time, however, we would like to make the following comments and clarifications which we feel will benefit the general readers of this journal.

The authors provide no information regarding sample size calculation; this is very important, as sample size can influence the precision and power of a study (2).

Additionally, there is no mention of the method of urine collection used for the study subjects. This is of special concern for infants and small children, as obtaining a "clean catch midstream urine" sample is nearly impossible in such patients. Therefore, it is recommended that such samples be obtained by urethral catheterization or suprapubic aspiration (3).

The methodology section of this paper mentions the study participants to be children with urinary tract infection (UTI), which is diagnosed via a positive semi-quantitative urine culture (3); therefore, it is not clear why the authors chose to exclude children with "no evidence of pyelonephritis on Dimercaptosuccinic acid (DMSA) scan." If the authors wished to include only those children with DMSA scan evidence of pyelonephritis, it should be noted that "DMSA scans revealed reduced uptake in 22 patients (66.7%) and scars in nine cases (27.3%)"; this indicates that nine cases did not display any DMSA scan evidence of pyelonephritis. On the other hand, all young children with febrile UTI are at an increased risk of acute pyelonephritis, and it is difficult to differentiate upper from lower UTI in this age group. Therefore, it is recommended that all episodes in young children, especially those that occur before 3 months of age, be managed as pyelonephritis (3). The benefit of DMSA in an acute stage in this category is questionable and does not alter the management of individual cases (4).

Furthermore, the authors do not mention whether the recruited children had any previous history of UTI. This is of particular concern, as very high proportions of children in the study had urinary tract anomalies.

The methodology section of this paper mentions that urinary albumin (U/A), urinary Creatinine (U/C), blood sugar, triglyceride, and cholesterol were measured at admission and after five days. The utility of such investigations in the context of the present study is not well understood, especially given the fact that even infants were included in this study; above all, the data for these variables are not presented in the results section. When speaking to the limitations of the study, the authors mention that they were not able to obtain serum Ghrelin in light of the ethical issues that surround the withdrawal of blood from infants and children. However, the authors could have easily chosen to perform serum Ghrelin assessments instead of the above-mentioned blood tests.

Though the present study indicated no significant difference in mean urinary Ghrelin concentration before and after treatment in patients with and without anorexia, the authors state that they "think at least it can indirectly have a role." It is not clear what caused the authors to make such a comment. Because inflammatory parameters are expected to decrease following treatment for UTI, the simultaneous observation of a decrease in urinary Ghrelin concentration is the only currently-known association.

References

1. Sharifian M, Shiva MR, Sepahi MA, Shohadaee S, Esfandiar N, Fallah F. Urinary Ghrelin Concentration in Children With Urinary Tract Infections Before and After Treatment. *Arch Pediatr Infect Dis.* 2016;**4**(2):34096. doi: 10.5812/pedinfect.34096.
2. Jones SR, Carley S, Harrison M. An introduction to power and sample size estimation. *Emerg Med J.* 2003;**20**(5):453–8. [PubMed: 12954688].
3. Subcommittee on Urinary Tract Infection SCOQI, 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. doi: 10.1542/peds.2011-1330. [PubMed: 21873693].

4. Hoberman A, Wald ER. Urinary tract infections in young febrile children. *Pediatr Infect Dis J.* 1997;**16**(1):11–7. [PubMed: 9002094].