antibiotic therapy. This cannot be generalized as whole picture has to be taken, even the reported patient had rash and conjunctival inflammation to start with.

## VIVEK KUMAR AND KIRAN SODHI

12 Air Force Hospital, Akash Vihar Kunraghat, Gorakhpur 273 002, UP, India. vk3532@gmail.com

## REFERENCES

- Husain EH, Al-Rashid. Kawasaki disease in association with urinary tract infection. Indian Pediatr. 2011;48:808-9.
- Jan SL, Wu MC, Lin MC, Fu YC, Chan SC, Lin SJ. Pyuria is not always sterile in children with Kawasaki disease. Pediatr Int. 2010;52:113-7.
- Indian Society of Pediatric Nephrology. Revised Statement on Management of Urinary Tract Infections. 2011;48:709-17.
- Jieh-Neng Wang, Yuan-Yow Chiou, Nan-Tsing Chiu, Mei-Ju Chen, Bi-Fang Lee, Jing-Ming Wu. Renal scarring sequelae in childhood Kawasaki disease.Pediatric Nephrol. 2007;22:684-9.

## REPLY

We would like to thank the authors for providing an important opinion regarding our case report [1]. We agree that 10.7% of children with Kawasaki disease (KD) have bacterial pyuria, as was reported by Jan, *et al.* [2]. The authors in this study concluded that there is an associated urinary tract infection (UTI) in children with diagnosed KD. This is contrary to the point we were trying to make in this case report, where the initial clinical and laboratory presentation was consistent with UTI and the patient was

# Hyperglycemia in PICU: Tread with Caution

Dr Sanklecha has raised some valid points in his communication [1]; nevertheless, I would like to put these in their right perspective.

First of all, 17.5% to 70% of patients in the various studies included in the review [2] were post-operative/ surgical. In the only prospective randomised controlled study of tight glycemic control in children by Vlasselaers, *et al.* [3], 600 out of 700 (85.7%) patients were post-operative cardiac surgical, high risk surgical or those with trauma. Further, in a retrospective study in 177 post-operative (cardiac surgery) children admitted to a PICU, diagnosed later with KD, as the fever was not responding to antibiotics and the patient was developing criteria of KD during hospitalization.

As it is internationally accepted in infants and children who are not toilet trained; urine should be collected in a sterile way, which was the case here. The urine was collected through a transurethral catheter. We have mentioned the positive significant findings in the urine analysis. Blood culture was done as part of the septic workup and it was negative.

The infant in the case report [1] was treated acutely and long term for both KD and UTI; so had DMSA which was negative. This was not mentioned as it was not serving the purpose of the case report.

Finally, we agree with the authors that we cannot generalize that KD should be in the differential diagnosis in patients with UTI not responding to antibiotic therapy. In addition, we can add this statement "if they have showed some criteria suggestive of KD like rash, conjunctivitis or mouth changes".

### ENTESAR H HUSAIN AND MARYAM AL-RASHID entesar@qualitynet.net

#### References

- Husain EH, Al-Rashid M. Kawasaki disease in association with urinary tract infection. Indian Pediatr. 2011;48:808-9.
- 2. Jan SL, Wu MC, Lin MC, Fu YC, Chan SC, Lin SJ. Pyuria is not always sterile in children with Kawasaki disease. Pediatr Int. 2010;52:113-7.

non-survivors had higher peak glucose levels  $(389.3 \pm 162 \text{ mg/dL } vs \ 162 \pm 106.3 \text{ mg/dL})$  and longer duration of hyperglycemia  $(3.06 \pm 1.67 vs \ 2.11 \pm 0.92 \text{ days})$  during the first 5 post operative days, compared to survivors [4].

In the absence of any scientific studies, it would be difficult to substantiate the author's observation that postoperative hyperglycemia is not necessarily indicative of a poor outcome. Though hyperglycemia may not directly be associated with mortality, significant increase in morbidity such as, increase in duration of ventilation, higher wound infection rates and increase in length of ICU/hospital stay is possible. However, it is pertinent to mention here that some studies have shown that early post-operative hyperglycemia (within first 24-48 hours) is not associated with a worse outcome [4,5]. To conclusively determine whether post-operative hyperglycemia is indeed assoCORRESPONDENCE

ciated with a worse outcome, we await the results of an ongoing trial in post-operative cardiac surgical children [6].

Secondly, the evidence is now moving in favour of a modest glucose target of 110-150 mg% rather than strict normoglycemia [2]. There is no doubt that targeting strict normoglycemia definitely increases the risk of hypoglycemia. The same has been emphasized in other studies too [4].

Finally, I have no doubt that insulin infusion to correct hyperglycemia, especially in our children where malnutrition is rampant, cannot be taken lightly. This can only be embarked upon once the nursing personnel are trained, adequate nutrition is provided and locally feasible protocols are devised.

## BANANI PODDAR

Department of Critical Care Medicine, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow - 226 014, India. bananip@sgpgi.ac.in

## References

- 1. Sanklecha M. Hyperglycemia in the PICU: Tread with caution. Indian Pediatr. 2011;48:824.
- 2. Poddar B. Treating hyperglycemia in the critically ill child: Is there enough evidence? Indian Pediatr. 2011;48:531-6.
- 3. Vlasselaers D, Milants I, Desmet L, Wouters PJ, Vanhorebeek I, van den Heuvel I, *et al.* Intensive insulin therapy for patients in paediatric intensive care: a prospective, randomized controlled study. Lancet. 2009;373:547-56.
- 4. Ulate KP, Falcao GCL, Bielefeld MR, Morales JM, Rotta AT. Strict glycemic targets need not be so strict: A more permissive glycemic range for critically ill children. Pediatrics. 2008;e898-904.
- 5. Yung M, Wilkins B, Norton L, Slater A. Glucose control, organ failure, and mortality in pediatric intensive care. Pediatr Crit Care Med. 2008;9:147-52.
- 6. Maintaining normal blood sugar levels in children undergoing heart surgery to reduce the risk of infections and improve recovery (The SPECS study). http:// clinicaltrials.gov/ct2/show/NCT00443599. Accessed on October 10, 2010.