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Letter to Editor

Paediatrics Section

Correspondence: Evaluation of Risk Factors Associated with First Episode of Febrile Seizure

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Dear Editor,

We read with great interest the original article by Sharawat et al., in the May, 2016 issue of your journal [1]. At first, we would like to commend the authors for their endeavour but at the same time feel that few clarifications are required and also would like to make the following comments which would benefit the general readers of JCDR:

1. The authors state that "Anthropometric measurement of head circumference, weight, and length/height were taken and compared to reference values." But such data are not presented anywhere in the paper.
2. The methodology states that "Patients who had evidence of meningitis based on Cerebro Spinal Fluid (CSF) examination were excluded from the study". But it is not clear as to which patients were subjected to CSF examination. This is of special importance as most of the children (81.43%) had simple Febrile Seizure (FS) and American Academy of Paediatrics (AAP) strongly recommends [2] Lumber Puncture (LP) in patients < 12 months of age presenting with fever and seizure because meningeal signs may be minimal or absent in this age group. Moreover, children receiving antibiotics before presentation were not excluded from the present study, again neccesitating LP in such cases as antibiotic treatment can mask the signs and symptoms of meningitis [2].
3. Amongst the cases, 13 (18.57%) children had complex FS and it is recommended to subject these children to a more extensive diagnostic workup before they can be labelled safely [3]. But the authors do not mention any such workup being done.
4. Upper Respiratory tract Infection (URI) and Urinary Tract Infection (UTI) were found to be the predominant cause of fever in children with FS. But firstly, the authors do not mention urinary investigations among the investigations being done in the study. This really questions the diagnosis of UTI made in these children. Secondly, the usefulness of comparing the etiology of fever in the case and control group will not be appropriate as it is very unlikely for children with URI or UTI alone to get admitted at a tertiary care hospital in the absence of complications such as seizure.
5. The mean serum calcium level in the cases was 8.2±0.6mg/dl. Hypocalcaemia in children is defined as total serum calcium level < 8.7mg/dl [4]. Therefore, it is evident that many of these children actually had hypocalcaemia. This raises the question whether they can be labelled as febrile seizure as per the definition [5], or as hypocalcaemic seizure. The same applies for hypoglycaemia as well as the mean blood glucose level was 82.3±30.0mg/dl. Moreover, it also raises the concern that these children with hypocalcaemia or hypoglycaemia related seizure would have been labelled as febrile seizure and not investigated or treated appropriately.
6. The authors incriminate male gender as one of the risk factors only on the basis that male: female ratio among the cases was 2.18:1. But as the study was conducted at a single tertiary care centre, it is probably a reflection of the referral bias or the gender bias in seeking medical attention as similar (p = 0.71) gender ratio (Male:Female = 2.5:1) was also seen in the control group.
7. The authors studied antenatal and perinatal factors as possible risk factors and found that antenatal haemorrhage and difficult labour in mother as significant. But firstly, they did not provide a possible explanation for such a finding. Secondly, they did not give data of other such factors studied (e.g., maternal smoking, prolonged NICU (Neonatal Intensive Care Unit) stay, duration of breast feeding etc.,) which was not found to have significant association. This is especially important as some of them were found to have positive correlation to first episode of febrile seizure in children in previous studies [6].

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