

Convulsion following gastroenteritis in children without severe electrolyte imbalance

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Reply

We are grateful for the comments of Dr. Şinasi Özsoylu about the article published in the Turkish Journal of Pediatrics concerning convulsion following gastroenteritis in children¹. In the reported retrospective study, only factors that were associated with convulsion and were available from patients' documents were evaluated.

Regarding the calcium level, despite the hypocalcemia in five cases, the calcium level was not significantly different between the two groups ($p > 0.05$). This would be because of the sample size. The level of magnesium is not determined in our hospital, as it is not included in the routine protocol. Generally, the magnesium level was not evaluated as standard protocol in people with convulsion, according to the Current American Academy of Pediatrics (AAP) recommendations that serum electrolytes, calcium, phosphate, magnesium, complete blood count, and blood glucose should not be performed routinely in a child with a first simple febrile seizure². Suspicion about the possible hypomagnesemia arose when the patient's calcium level did not improve following calcium administration³, while the calcium level in all of the cases with hypocalcemia increased after intravenous calcium, in the reported study⁴.

Based on the data extracted from the documents, seven of nine (7/9) cases and two of two (2/2) controls had shigellosis with flexneri serogroup. Comparison using chi-square test did not reveal a significant difference between the two groups ($p = 0.07$). Despite the previous reports about encephalopathy by *Shigella flexneri* during gastroenteritis^{4,5}, such a hypothesis was not confirmed from the results of the present study.

Although EEG could demonstrate some evidences of encephalopathy in the patient

with convulsion, EEG evaluation was only carried out in the case group and only one of the nine EEGs had an abnormality. As EEG was not done in the control group (lack of indication), a comparison of the two groups to determine differences in EEG abnormality was not possible.

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