



Do Hyponatremia and Anemia in Simple Febrile Convulsions Affect Recurrence in First 24 Hours?

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INTRODUCTION

Febrile convulsions (FC) are the most common neurological disorder in childhood. FC, which is among the first reasons for applying to the pediatric emergency department, can cause serious anxiety in parents. Therefore, it is important to detect its recurrence risk factors.

OBJECTIVE

To investigate the effects of hyponatremia and anemia on recurrence in the first 24 hours in simple FC.

MATERIALS AND METHODS

This cross-sectional, perspective study was conducted in 110 children aged between 6 months and 72 months who applied to the Ataturk University Medical Faculty Research Hospital Pediatric Emergency Service between November 2020 and September 2021. Approval was obtained from Ataturk University Faculty of Medicine Ethics Committee. The study group consisted of 60 children with first FC and the control group consisted of 50 children with fever without seizures.

RESULTS

There was a significant difference between the mean sodium value of the study group (134.6±2.46 mEq/L) and the control group (136.6±2.67 mEq/L) (<p0.01). The rate of hyponatremia in the study group (43.3%) was significantly higher than in the control group (14%) (p<0.01). There was no significant difference in the mean sodium value and the presence hyponatremia between the reccuring and non-recurring groups in the study group (p=0.61, p=0.37). There was no significant difference between the study (12.39±0.99 g/dl, 11.7%) and the control group (12.68±1.09 g/dl, 10%) in terms of mean hemoglobin value and anemia rate (p= 0.24, p=0.78). There was no difference between the mean hemoglobin values of the groups with and without recurrence in the study group (p=0.97). (Table 1 and 2).

Table 1. Average Sodium Values in Research Group

Groups	Average Sodium Values±SD (mEq/L)	p Value
Control group (A)	136.6±2.67	Group A and B, 0,0002
The non-recurring group (B)	134.5±2.54	Group A nad C, 0.033
Recurring group ©	134.9±2.28	Group B and C, 0.61

Table 2. Comparison of Presence of Hyponatremia According to Research Groups

Groups	Presence of hyponatremia		p Value
	Available	Not available	
Control group (A)	7 (14%)	43 (86%)	Group A and B, 0.001
The non-recurring group (B)	21 (46.7%)	24 (5.3%)	Group A and C, 0.39
Recurring group ©	5 (33.3%)	10 (66.7%)	Group B and C, 0.37

CONCLUSIONS

Although mean sodium values are low in patients with FC, hyponatremia and anemia do not appear to have an effect on simple FC recurrence in the first 24 hours.

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