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Expression of NLRP3 Inflammasome in Febrile Seizures and Clinical Significance

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ABSTRACT The aim of this study was to explore the expression of nucleotide-binding oligomerization domain-like receptor protein 3 (NLRP3) inflammasome in children with febrile seizures (FS). Onset age at 1-3 years old, body temperature during attack $\geq 38.5^{\circ}\text{C}$, complex FS, family history of seizures, duration of attack >15 min, electroencephalographic abnormality, serum NLRP3 level >1.75 ng/L and interleukin- 1β (IL- 1β) level >48.01 pg/mL were risk factors for recurrence after first attack ($P<0.05$). The area under the receiver operating characteristic curve, sensitivity and specificity of the prediction model in forest plot were 0.821 (95% confidence interval: 0.771-0.878), 0.922 and 0.695, respectively, suggesting high accuracy. The standard curve fitted well with the prediction curve, indicating high concordance between predicted recurrence and actual condition. Serum NLRP3 level >1.75 ng/L is a risk factor for recurrence after first attack in children, and NLRP3 level is accurate for predicting recurrence.