

THE IMPORTANCE OF ELECTROENCEPHALOGRAPHIC EXAMINATION IN CHILD FEVER CONVULSIONS

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Introduction: Febrile convulsions (CF) occur in a febrile context, can be simple, generalized tonic-clonic, duration <15 min., once in 24 hours; or complex - predominantly focal, duration > 15 min., repeated in 24 hours, often in a child with a neurological condition. There are conflicting opinions regarding the need for electroencephalographic examination (EEG) in CF.

Keywords: febrile convulsions, simple, complex, child

Propose: Evaluation of the clinical and electroencephalographic characteristics in children with CF to assess the need for neurophysiological examinations in these children according to the type of seizures.

Material and methods: A retrospective study was performed on a group of 32 children (boys / girls ratio of 1: 1), aged 6 months to 5 years, who suffered CF: (1) simple febrile seizures (CFS) - 22 (68.8%) and (2) complex febrile seizures (CFC) - 10 (31.2%). The type of epileptic seizures and the result of the EEG examinations (performed immediately and 2 weeks after the CF) were described in all children.

Results. In 22 children, epileptic seizures had a CFS character: tonic seizures - 5 cases (22.7%) and generalized tonic-clonic seizures - 17 (77.3%), with a duration of up to 1-2 min. (63.6%), 2-5 min. (27.4%), 5-15 min. (9%), without recurrence in 24 hours, on a normal neurological background. The other 10 children (6 boys / 60% and 4 girls - 40%) had CFCs: generalized (30%) and focal (70%), with a duration of up to 15 min. (60%), 15-30 min. (30%), 30 min. - 1 hour (10%), recurrent 3-5 seizures in 24 hours, sometimes on a background of a pre-existing neurological condition (60%). EEG recording immediately after the CFS - normal (31.8%), paroxysmal manifestations (68.2%); in CFC - pathological aspect with epileptiform character (100%), after 2 weeks: in CFS - normal appearance (90.9%); in CFC - epileptiform activity (80%), theta-delta waves (20%).

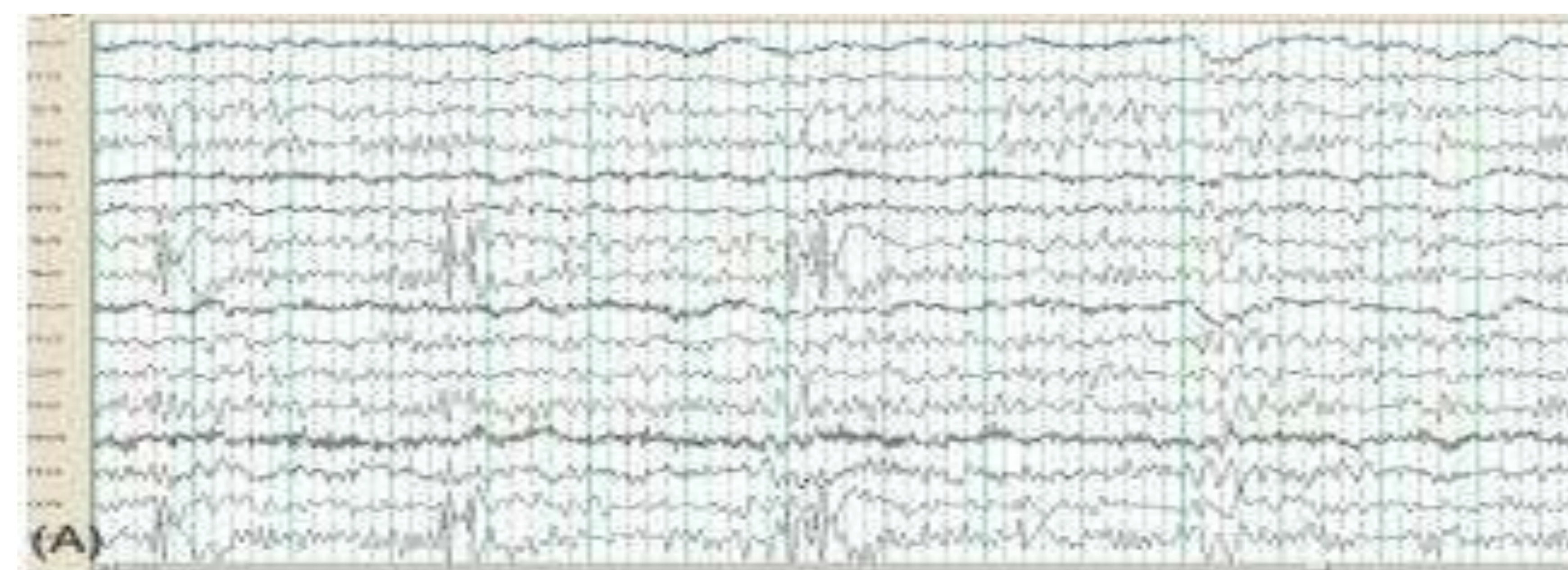
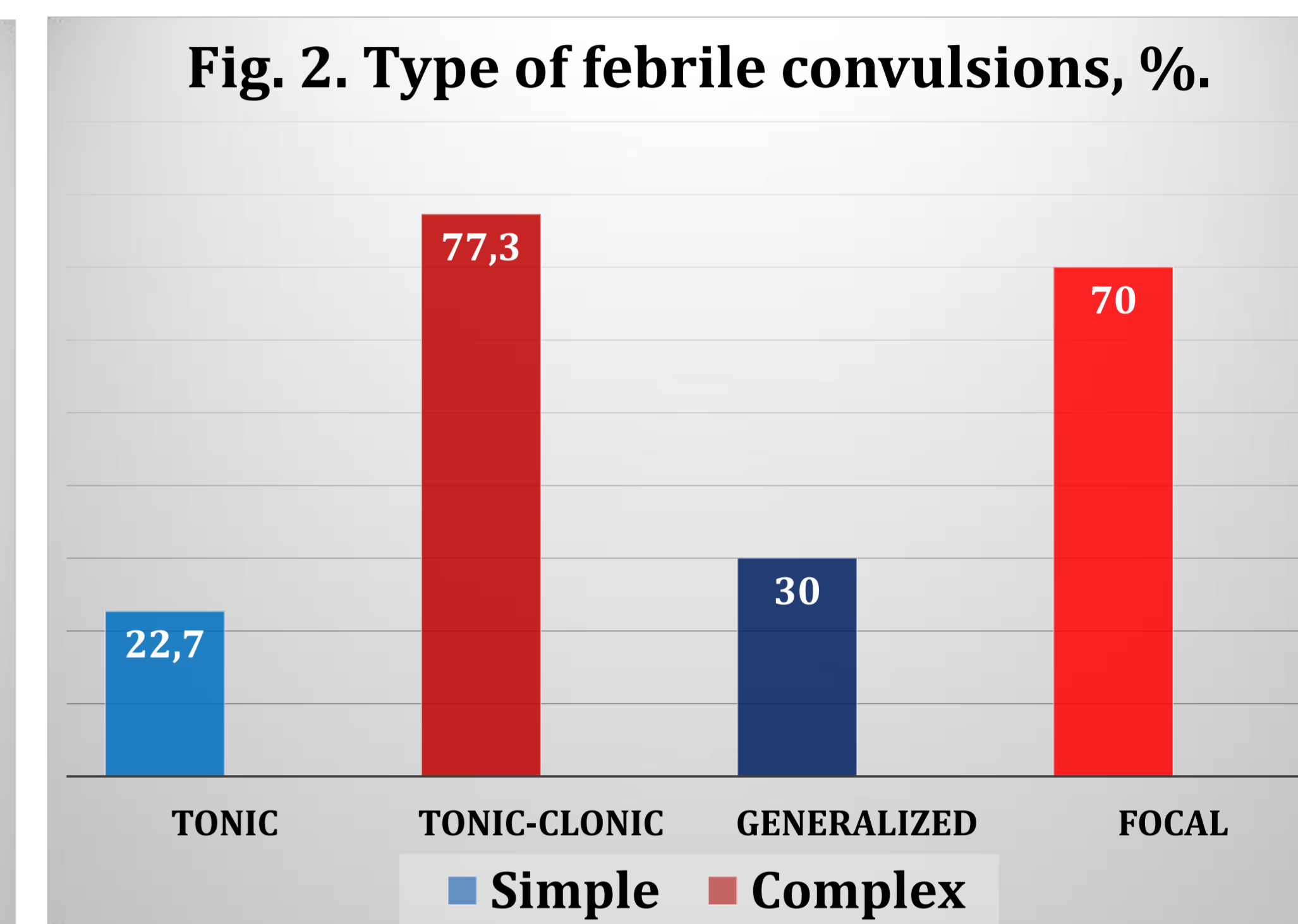
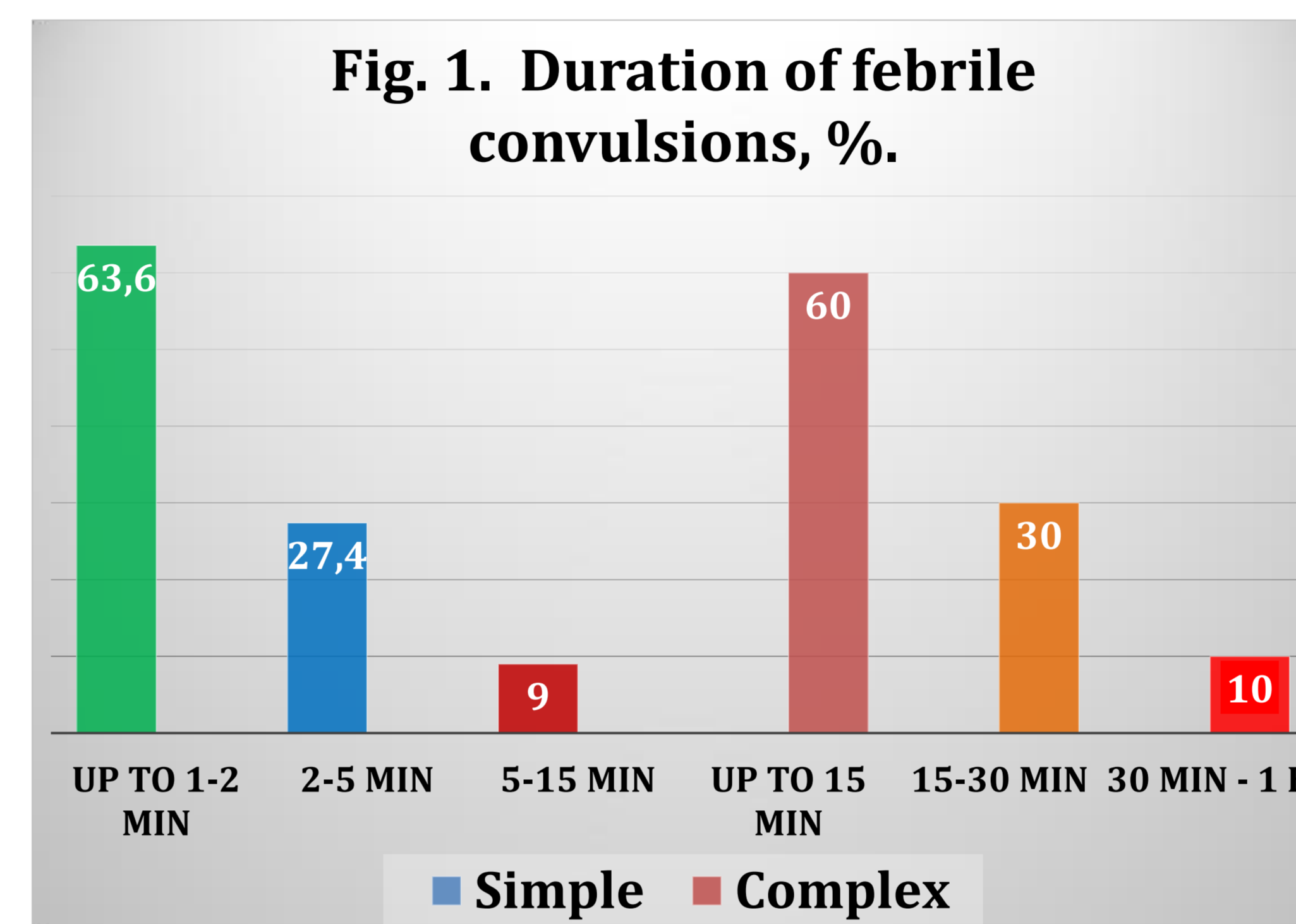


Fig. 3. (A) EEG. Focal spike discharges from the right temporoparietal area in a 29-month-old boy who was having a simple febrile seizure. [1]

Conclusions: Seizures in febrile context in children are often suggestive of CF type (character, duration and recurrence of seizures). EEG changes in CFS mean no need for such an examination, and those present in children with CFC (immediately after access and within 2 weeks after it) suggest the need for a repeated EEG.

Bibliography: 1.Korean J Pediatr 2013; 56(12) Sajun Chung, MD Department of Pediatrics, Kyung Hee University Medical Center, Kyung Hee University School of Medicine.