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Transient infant movements (TIM): frequent infant non-pathological developmental motor phenomena

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Lombroso and Fejerman in 1977 described non-epileptic paroxysmal movements that appeared during the first year of life in normal infants and named them “Benign Myoclonus of the Early Infancy”. In fact, they particularly studied the phenomena that were clinically similar to myoclonus and spasms.

In 2018, Fernandez-Alvarez described other paroxysmal non-epileptic motor phenomena and proposed the new definition “Benign Polymorphous Movement Disorder of Infancy (BPMDI)”, pointing out the clinical polymorphic presentation of these events.

*In 2019, Nagy and Hollody underlined the importance of recording **home videos** of the phenomena to assist paediatricians and neurologists in decision making.*

*The aim of our work was to **document and describe** new and different aspects of these polymorphic phenomena through video/EEGs with polygraphy and home videos of our patients in order to disclose, particularly to paediatricians, the existence of these manifestations that appear to be transitory, but very frequent in normal infants.*

*Secondly, we sought a **new definition** that could be easy to remember and that includes all the different manifestations.*

We selected all full-term infants who presented with a diagnosis of:

Fejerman-Lombroso,

Paroxysmal non-epileptic movements,

Benign Myoclonus of the Early Infancy,

Shuddering attacks

during the first year of life, with recordings based on video/EEG with polygraphy performed in our unit or via home video.

Results:

- ***we selected 21 infants;***
- ***age at onset ranged between 4 and 13 months (average: 7 months);***
- ***age at disappearance ranged between 7 and 16 months (average 10 months);***
- ***duration of the phenomena ranged between 2 weeks and 19 months (average 4.6 months);***
- ***85% of infants had normal neurodevelopment at onset and follow-up (mean follow-up: 31.47 months) and 15% presented with neuropsychological or neurosensory deficits;***
- ***we distinguished four different patterns of movements: movement of the head in 50%; shuddering attacks in 30%; tonic brief contractions of the trunk and limbs in 10%; elevation of the shoulders in 10%.***

The paper describes some new clinical characteristics of paroxysmal non-epileptic infant movements in order to better classify the polymorphic nature of these non-pathological phenomena in infancy.

We suggest that, within the context of a healthy infant with normal neurodevelopment and without any comorbidities, at the onset of the phenomena, simple video observation of these events should be adequate for pediatricians to hypothesize a benign aetiology. Later on, video-polygraphic/EEG recording is recommended in order to confirm the normality of cerebral activity and, when possible, record the events.

***“Transient Infant Movements”** and its acronym **“TIM”** is proposed as a practical term to describe these episodes*