Developmental outcomes within the first year of diagnosis; A descriptive study of children diagnosed with infantile spasms

Sumanasena SP, MD1 \ Wanigasinghe J, MD2 \ Muhandiram J, MBBS2 \ Arambepola C, MD2
1 Faculty of Medicine, University of Kelaniya, 2 Faculty of Medicine, University of Colombo
Sri Lanka

Objectives
- To describe the developmental attainments of a cohort of children with infantile spasms after one year of follow up.
- To look at the association between the developmental attainments at 1 year follow up with determinants of outcome.

Methods
Design: A prospective cohort study (a part of a larger randomized controlled single blinded clinical trial to assess the treatment outcomes with hormonal therapies)

Study setting: Tertiary care neurology unit at the premier children’s teaching hospital, Colombo.

Participants: Children presenting for the first time

Study instruments: Bayley III Infant and Toddler Developmental scales

Data analysis: Significance of the mean difference in the scaled scores from presentation to 1 year by paired t test.

Comparison of developmental attainments at 1 year by
- Age of onset: less than 6 months or more
- Duration of spasms prior to presentation: 30 days or more
- Seizure response to treatment by day 14: present or absent

Results
N= 33
Mean age of onset: 5.6 (SD 4.4) months
The mean age at presentation: 8.4 (SD 5.5) months
The mean gap between the onset and presentation: 73.7 (SD 71.6) days
Complete spasm control by day 14: 53.6%
The mean duration of review from the commencement of treatment: 12.8 (SD 3.3) months

Developmental outcomes within the 1st year

Developmental outcomes

Conclusions
Majority of children had low scores in all areas of development at presentation and after 1 year of follow up. Despite spasm control of more than 50% of children on day 14, by the end of year 1 the developmental scores showed a deterioration.