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Idiopathic infantile asymmetry and infantile hemiplegia

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In their recent paper, Philippi et al. [1] proposed a welcome evaluation scale which may be used across the different approaches that have been applied to infants with idiopathic asymmetry. It provides a functional view based on posture, spontaneous and reactive movements, hopefully unifying the host of syndromes under which these children came in the past. All these disorder categories (briefly reviewed in the paper's introduction and to which Fulford's and Brown's squint-baby syndrome [2] may be added) are associated with particular differential diagnosis, ranging from muscle contracture to congenital bone deformity. In the context of developmental neurology, and in particular of reevalutaion of the cerebral palsy concept [3], it would appear relevant to stress the differences between idiopathic infantile asymmetry and hemiplegic cerebral palsy in the age group studied by Philippi et al. [1]. To characterize the clinical elements that may discriminate between hemiplegic cerebral palsy and non-cerebral palsy forms of asymmetric acquisition of neuromotor competences in infancy, we retrospectively studied 76 children who presented to our department of neurology in infancy with delayed and asymmetric motor development. The diagnosis of cerebral palsy was ascertained at the age of 2 years. There were divided in two groups (except for two patients with asymmetric spastic diplegia who were excluded): (1) those in whom a diagnosis of hemiplegic cerebral palsy was eventually made (41 patients), and (2) those in whom cerebral palsy was eventually ruled out (33 patients). Serial examination reports by a paediatric neurologist and a developmental physiotherapist were retrospectively analyzed for the first year of life for all patients. Clinical and paraclinical features of children in both groups were compared. Despite heterogeneity in severity, clinical features were consistent in each group with some overlap. Axial tone was low in both groups. Peripheral tone was characterized by flexor hemihypertonia in hemiplegic children, and flexor hemihypotonia in non-cerebral palsy children. The movements of hemiplegic infants were ster-

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eotyped and nonselective on the pathologic side. The movements of infants in the non-cerebral group lacked fluency but were not stereotyped on the pathologic side. Weight bearing was absent in the former group and asymmetric in the latter. Ipsilateral protection reactions were absent in hemiplegia and slow in the other group. The long-term evolution of hemiplegic children was pejorative, with muscle retraction, joint deformities and functional impairment. Children in the other group progressively lost frank asymmetry, but often retained clumsiness. Although they had a markedly hypomotor behaviour as infants, some patients became hyperkinetic children. These retrospective results suggest that asymmetric acquisition of neuromotor competences is most often associated with abnormalities in tone and organization of movement which manifest differently in the infancy period whether they correspond to hemiplegic cerebral palsy or to idiopathic infantile asymmetry.

References

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