Stroke in children

Oral communications

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Recommendations for clinical practice after neonatal arterial ischemic stroke: Clinical monitoring and early rehabilitation intervention
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Opinion/Feedback Neonatal arterial ischemic stroke (NAIS) affects one child in 6–17 100,000-birth term neonates, most of these children will keep long-term motor and cognitive impairment. In 2014, initiated by the French Center for Pediatric Stroke in association with the French Society of Neonatology, a steering committee was created to propose clinical guidelines after NAIS. From all the relevant questions, the importance is given to long-term outcomes after a NAIS with a need for a better description of motor and cognitive outcomes after a NAIS in order to propose a more consensual monitoring for these children to improve their management. Guidelines were proposed based on an extensive literature review and experts experience. About 30% of children after a NAIS will develop a unilateral cerebral palsy requiring a management by a team with expertise in physical medicine and rehabilitation. To quantify impairments, activity limitations and participation restrictions resulting from this NAIS, evaluations, with reliable tools must be carried out systematically, early and repeated annually through adolescence. A multidisciplinary team with a longitudinal follow-up, in all the different developmental dimensions, must conduct these evaluations in term of motor skills, cognitive impairment, behavior, autonomy, quality of life, and participation. Consequences on family functioning need to be evaluate in order to help children and family coping with this event. A number of data on brain plasticity and effect of early interventions in association with preliminary results in children with cerebral palsy are very much in favor of early treatment. It remains now important to determine the intensity and what types of early intervention. The importance is given in all cases to a comprehensive care of the child and his/her family with the goal to prevent limitations in terms of activity and participation.

Keywords Pediatric Stroke; Rehabilitation; Reeducation; Clinical guidelines

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Motor system after neonatal arterial ischemic stroke: MRI studies
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Opinion/Feedback Long-term motor performances after unilateral neonatal stroke are variable. The presence of motor deficits may be related to structural characteristic (size and location) of the infarct site but also in brain area remote from this injury (cerebellum and thalamus). Analyzing in functional MRI and structural MRI the relationship between long-term motor performance and motor system after neonatal stroke could provide cerebral target for therapy.

Keywords Neonatal arterial ischemic stroke; Motor system; Plasticity

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