

with a younger age of walk acquisition. These differences were not significant. The language development was better in G1 ($P = 0.01$). The absence of language was 13.4% in G1 versus 28.1% in G2. The number of children with difficulties in cognitive development was higher in G2 ($P = 0.02$). Behavior problems were more frequent in G2 with a significant difference for hyperactivity ($P = 0.014$).

Discussion The management of children with risk of neurosensory impairments remains today an ethical and public health priority. Early interventions take a special place. According to the European Academy for Childhood Disability, although its effectiveness is not scientifically proven and the appropriate assessment methods are lacking, it is now accepted as a right [1]. The results of this study confirm clearly the interest of early treatment in a specialized structure.

Keywords Cerebral palsy; Children; Management; Specialized network; Development

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

Reference

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Fate at 2 years of children with risk of developmental disorders followed by the network Grandir en Languedoc Roussillon: Effect of isolated or associated motor development disorders



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Introduction Since 2010, the “Grandir en Languedoc Roussillon” network proposes a monitoring until 7/8 years for children with a risk of handicap, and includes in average 700 newborns per year. Three risk levels are defined: very high, high and moderate risk, depending of perinatal pathology. The children are examined by a referent practitioner who passes developmental surveillance data on to the network.

Method We examined the data from 546 24 months aged children (corrected) in five developmental domains.

Results Abnormalities of global motor function were found in 11.6% of children, of fine motor control in 5.3% of them. 15% had sensorial disorders (visual and/or auditory), 20% had delayed speech, and at last, 20% of children had behavioral difficulties concerning relationship, separation, feeding, and sleep.

Discussion According to scientific literature number of cerebral palsy reaches 2/1000 living births [1]. Risk is more important for preterm infants, inversely proportional to gestational age. In our cohort, “very preterm” or “extremely preterm infants” are over-represented: 3.8% cannot walk at 24 months (corrected) or can walk despite cerebral palsy. In infant with handicap risk, motor disorders are often associated with other developmental difficulties, sometimes minor but not devoid of consequences on fate [2]. The screening and the management of those associated disorders permit to reduce the additional disabilities and learning troubles. This is one goal of the vulnerable children follow-up network.

Keywords Screening; Cerebral palsy; Preterm infant; Development disorder

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Relations between cognition and motricity in children with neonatal arterial ischemic stroke



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Introduction and goal Perinatal arterial ischemic stroke (PAIS) affects one child for 4000 births. The few studies about cognitive development specific to PAIS showed that cognitive performances in this population do not follow up a normal development (Westmacott et al., 2010; Ricci et al., 2008). Based on new data about relation between motricity and cognition (Smits-Engelsman et Hill, 2012), and on the theory of the embodied cognition, led us to hypothesize that cognitive performances would be correlated to the motor performances in children with PAIS.

Patients and methodology We tested 77 7 years old children meeting the criteria of neonatal AIS, with a diagnosis before the 28th day of life relying on cerebral imagery. After excluding children with seizure and bi-hemispheric lesion, 56 children participated to our study. The cognitive evaluation was performed with the Wechsler Intelligence Scale for Children (WISC-4), the motor evaluation relied on testing of gross motor of the upper arm (Box and Block Test) and fine prehension test (“Nine Hole Peg Test”). The localisation of the lesion, the economic level of parents, the gender, sensory impairments and the presence of hemiplegia were collected. We analyzed these results with simple linear regression.

Results The main result of our study is the significative correlation ($P < 0.03$) between scores of the WISC4 (except for working memory index) and motor results. In contrast we did not find any correlation between the scores of the WISC4 and the presence of hemiplegia or with lesion localization.

Discussion Many brain networks develop during the first year through sensorimotor experiences, which contribute to the emergence of knowledge. This concept of development, supported by the approach embodied cognition, can explain the correlations between cognition and motor found in our work and in several studies with children with other early neurological damage.

Keywords Perinatal accident ischemic arterial stroke; Development; Cognition; Motor; Embodied cognition

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