



Title	Thalamic T2 Hyperintensities and Cognitive Function in Chinese Children With NF-1
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indicate that, using the Amat-c method, the children learned strategies that improve their school achievement and self-image. This method needs to be further evaluated but may be a valuable treatment option for improving cognitive efficiency in children with acquired brain injuries.

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S. KISELEV. The Relation of Reaction Time and Brain Dysfunction in Preschool Children.

Can Reaction Time reflect the dysfunction of different areas of brain in preschool children? Thirty children of age 6–7 took part in the research. With the help of the computer technique developed by the author, we have investigated the simple reactions, discrimination reactions and choice reactions. The neuropsychological investigation of children was carried out. We used a technique "Diakor," developed at Moscow State University. This technique permits to establish the dysfunction of 4 areas of cerebral cortex (forward-left, back-left, forward-right, back-right). The level of dysfunction (LD) of these areas of a brain was measured. The correlation analysis was carried out (between LD of different areas of brain and time of the investigated reactions). The time of simple reaction does not significantly correlate with LD. The time of discrimination and choice reactions significantly correlate with LD. The specific relation LD of some areas of a brain and time of some reactions was revealed. Particularly, correlation coefficient between LD of forward-left cerebral cortex and time of choice reactions equals 0.71, while appropriate correlation coefficient for the forward-right cerebral cortex equals 0.38. Thus it is possible to assume that the time of some reactions can be used for an estimation of a LD of some areas of brain in preschool children.

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C. LEUNG, W. GOH, & P. KHONG. Thalamic T2 Hyperintensities and Cognitive Function in Chinese Children With NF-1.

Moore et al. found that lower PIQ was associated with thalamic UBOs while Jerring et al. suggested that simple presence of UBOs in the thalamus did not contribute to further lowering of cognitive and motor performance. In this study 32 right-handed Chinese children with NF-1 (age range 5–16 years) underwent MRI and neuropsychological testing including Hong Kong Wechsler Scale for Children, Hong Kong List Learning Test (HKLLT), and Rey Complex Figure Test (RCFT). Twelve children were found to be thalamic UBO+, 12 had UBOs elsewhere, and 8 had no UBOs. NF-1 children scored lower across most of the subtests in Wechsler Test when compared with the normal population but not to a significant .05 level. UBO+ group had a lower FSIQ ($M = 94.63$) as compared to the UBO- group ($M = 100$) but again not to a significant .05 level. However, thalamic UBO+ group (FSIQ = 100.65) had a significantly lower FSIQ than thalamic UBO- group (FSIQ = 88.17; $p = .031$). Contrary to what one might expect, Pearson correlations showed that among the thalamic UBO+ group, the greater the volume of UBO in the site, the better the performance in cognitive functioning (FSIQ, $r = .745$, $p = .013$), verbal memory (HKLLT, $r = .635$, $p = .048$), and visual memory (RCFT, $r = .641$, $p = .046$). It is postulated that the growth of UBOs have positive effects in preserving the neuropsychological functions of the lesion area against further damage.

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C. SEEGMULLER, R. MASSA, A. DE SAINT MARTIN, E. HIRSCH, C. MARESCAUX, & M.N. METZ-LUTZ. Transient Cognitive Impairments in Idiopathic Focal Childhood Epilepsy: Myth or Reality?

Past studies have demonstrated the occurrence of momentary decrements in cognitive function concomitant to subclinical electroencephalographic (EEG) discharges. Although epileptiform discharges, particularly paroxysmic spike-wave discharges are one of the main features of focal idio-

pathic childhood epilepsy, only a few studies have investigated, in this form of epilepsy, transitory cognitive impairments (TCI) induced by epileptic discharges. Studies demonstrating the specific effects of focal or lateralized subclinical discharges concluded that TCI result from a disruption of a specific function rather than from a general impairment of attention or overall slowing mental processing. However, such results have not yet been replicated. To fill this gap, we investigated, in 13 young children affected by focal idiopathic childhood epilepsy, the immediate effect of spike-wave discharges on performances in three computerized detection tasks involving verbal, coloured geometrical shapes and meaningless visual drawings. In order to specify the stage of information processing impaired by epileptic discharges we examined their effects considering the time of occurrence of discharges during performance. Besides, we looked at the possible effect of various neurophysiological features of epilepsy, like the overall frequency of discharges, their activation during sleep and the morphology of discharges. We examined their relationship to sustained attention and learning abilities. Our study did not fully replicate the findings of earlier studies. Impaired cognitive performances did not appear closely linked to the occurrence of spike-wave discharges nor specific to the location of epileptic focus. Other permanent electrophysiological features seem more related to cognitive impairments in childhood epilepsy.

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A. NAKAGAWA & M. SUKIGARA. The Relationship Between Early Reduction of Imitative Responses and Mechanisms of Frontal Lobe Inhibition.

Meltzoff and Moore showed human neonates can imitate some adult facial gestures. These imitative responses decreased at approximately 2 to 3 months of age. To date, the question of why imitation disappears is still open. The present study examine the hypothesis that early imitative responses disappear following the maturation of inhibitory mechanisms associated with the frontal lobes. Four-month old babies were stimulated with mouth opening and tongue protrusions by the experimenter. The infants' behaviors before and after stimulation were coded and an index of imitative behavior was constructed for each infant. Two eye movement tasks (countersaccades and inhibition of return) were studied to assess inhibitory mechanisms. Each parent completed the IBQ-R (Infant Behavior Questionnaire-Revised). There was a negative relationship between tendency to imitate and the ability to inhibit as shown by the countersaccade task. No such relationship was observed with the inhibition of return task. Inhibition as measured by countersaccades correlated positively with activity level and negatively with duration of orienting as measured by parental reports on the IBQ-R. Inhibition of return correlated negatively with the subscales for smiling, low pleasure and vocal reactivity. These results suggest that inhibitory mechanisms mediated by the frontal lobe, but not other forms of inhibition, are related to reduction in the tendency of 4-month-old infants to imitate.

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M.D. RIS, R. AMMERMAN, & N. WALZ. The Taxonicity of Nonverbal Learning Disabilities (NLD).

As currently defined, it is not clear whether NLD should be considered a matter of *kind* or *magnitude*. The taxonicity of NLD, or the degree to which it is best construed as discrete *versus* continuous, has not been investigated using methods devised for this purpose. This study represents a preliminary attempt, using a developing database, to apply taxometric procedures described by Waller and Meehl. Subjects include adolescents with spina bifida (SPIBIF; $N = 50$), adolescents presenting with features of NLD (FEAT; $N = 35$) but no medical condition, and normal peers (NORM; $N = 35$). These adolescents received comprehensive neuropsychological evaluations as part of a longitudinal study. Twenty five percent of the SPIBIF group met minimal criteria for NLD which included a