DO DIFFERENT INITIAL DOSES OF L-T4 WITHIN THE RANGE OF 10-15 MCG/KG/DAY INFLUENCE NEURODEVELOPMENT DURING THE FIRST TWO YEARS OF LIFE IN CHILDREN WITH CONGENITAL HYPOTHYROIDISM?

Esposito Andrea¹, Bravaccio Carmela¹, Bruzzese Dario², Cassio Alessandra³, Gastaldi Roberto⁴, Mussa Alessandro⁵, Peroni Elena⁶, Polizzi Miriam¹, Vigone Maria Cristina⁶, Wasniewska Malgorzata⁷, Weber Giovanna⁶, Salerno Mariacarolina¹

¹ Department of Translational Medical Sciences, University of Naples Federico II; ² Department of Public Health, University “Federico II” of Naples; ³ Pediatric Department, Sant’Orsola-Malpighi Hospital, University of Bologna; ⁴ Department of Pediatrics, Istituto Giannina Gaslini; ⁵ Department of Pediatric and Public Health Sciences, University of Torino; ⁶ Department of Pediatrics, Vita-Salute San Raffaele University, IRCCS San Raffaele Hospital, ⁷ Department of Pediatrics, University of Messina

BACKGROUND AND OBJECTIVE

The initial L-T4 dose currently recommended in the treatment of congenital hypothyroidism (CH) is 10-15mcg/kg/day. We designed a multicenter randomized trial in children with CH to evaluate whether we could identify an L-T4 dose, within the range of 10-15mcg/kg/day, which could be associated with a better neurocognitive development.

METHODS

Seventy-two children with CH diagnosed by neonatal screening were enrolled in the study. They were randomly assigned to receive an initial L-T4 dose of 10-12.5mcg/kg/day (group A) or 12.6-15 mcg/kg/day (group B).

All patients underwent clinical examination and FT4 and TSH measurement periodically during the first two years of life.

At the age of 12 and 24 months they underwent Griffiths Mental Development Scales to evaluate cognitive development.

RESULTS

Clinical and hormonal details at study entry are reported in Table 1.

Growth during the first two years of life was comparable in the two groups of patients (Table 2).

Neurodevelopmental evaluation showed no significant differences in Global and Subscales Quotients between the two groups both at 12 and at 24 months of age (Figure 1).

The authors have nothing to declare.

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