2 NEUROPSYCHIATRIC DEVELOPMENT AND HEALTH IN CHILDREN WITH AND WITHOUT CONGENITAL HEART BLOCK BORN TO MOTHERS WITH RO/SSA AUTOANTIBODIES – A RETROSPECTIVE FOLLOW-UP

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Background and objectives Women with Ro/SSA autoantibodies have an increased risk of having a child with neonatal lupus erythematosus (NLE) which includes manifestations such as congenital heart block (CHB). Some studies indicate that the CNS may be affected in children with NLE, and other studies have shown that children of women with SLE have an increased risk for learning disabilities. However, it still seems uncertain whether exposure to Ro/SSA autoantibodies during fetal development may impair neuropsychiatric development in children with and without CHB. The authors therefore investigated neuropsychiatric development in children with and without CHB born to mothers with Ro/SSA autoantibodies.

Patients and methods Individuals were selected from a population-based cohort of CHB patients if fulfilling the criteria of having a mother with Ro/SSA autoantibodies and being born between 1980 and 2010. Medical records for siblings with and without CHB were retrieved from children primary healthcare centers and school health services and data on skin manifestations, and neuropsychiatric development (including locomotor skills, hearing, speech, attention, learning, behavior, anxiety and depression) was extracted. Records from 109 individuals, 58 with CHB and 51 of their siblings without CHB were collected. A questionnaire was sent to the mothers to gather information on maternal diagnosis and treatment during pregnancy.

Results The median time of follow-up was 12.7 years (25th–75th percentile: 8.1–17.5 years). Neuropsychiatric symptoms or disease were reported in 22 (20%) of the 109 children, 15 of which had CHB and 7 without CHB. Among the mothers of these 22 children, only one was steroid-treated during pregnancy. The most commonly reported problems were speech, locomotor, learning and hearing impairment, reported in 9%, 7%, 7% and 7% of all children. Two categories observed reached a statistical difference between the groups, attention deficit; 10% in the CHB group and 0% in siblings ($p<0.02$) and learning impairment; 12% in the CHB group and 2% in siblings ($p<0.05$). Among the nine mothers of children with attention deficit and/or learning impairment, seven mothers (78%) were diagnosed with SLE ($p<0.01$). None of the siblings had any reported neuropsychiatric diagnosis, whereas 4 children with CHB had a reported neuropsychiatric diagnosis. One female had dyslexia, one male had autism and two males had ADHD.

Conclusions Our data suggest that impairment in neuropsychiatric development in terms of attention deficit and learning impairment is more frequent in children with CHB than in their siblings. However, this risk appears predominantly confined to children of mothers with SLE.