HISTOLOGICAL CHORIOAMNIONITIS IS NOT ASSOCIATED WITH COGNITIVE OUTCOME AT 5 YEARS IN LOW BIRTH WEIGHT CHILDREN

P.I. Kaarese^{1,2}, C. Klingenberg^{1,2}, T.A. Hanssen³, J.A. Rønning^{1,2}, S.E. Ulvund⁴, L.B. Dahl^{1,2}

¹*Pediatric Department, University Hospital of North Norway*, ²*Department of Clinical Medicine, University of Tromsø*, ³*Department of Pathology, University Hospital of North Norway, Tromsø*, ⁴*Institute for Educational Research, University of Oslo, Oslo, Norway*

Background and aims: Prenatal inflammation and the fetal inflammatory response have been associated with preterm birth and subsequent neonatal lung and brain disorders. However, there is a paucity of information about the relation between prenatal infections and cognitive outcome in preterm children. The aim of this study was to examine the effect of prenatal inflammation on cognitive outcome at 5 years corrected age in low birthweight children.

Methods: Placentas from mothers who gave birth to an infant with birth weight < 2000 g and participated in a randomised controlled trial of an early intervention program were examined regarding the presence of histological chorioamnionitis (HCA). At 5 years corrected age cognitive outcomes were assessed with Wechsler's Preschool and Primary Scale of Intelligence-Revised (WPPSI).

Results: A total of 124 infants were included. Mean birth weight was 1397 g (SD 409) and mean gestational age 30.1 w (SD 3.1). Placental histology showed no signs of HCA in 42 (34%), mild HCA in 62 (50%) and severe HCA in 20 (16%) of the placentas. WPPSI scores were available for 113 children. There were no significant differences between the HCA groups in WPPSI verbal, performance or full-scale IQ adjusted for gestational age and possible intervention effect.

Conclusion: HCA is not independently associated with cognitive outcomes at 5 years in low birth weight children.