

Neurodevelopmental consequences of very preterm births

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Béatrice Larroque and colleagues (March 8, p 813)¹ report different negative neurodevelopmental consequences of very preterm births in a 5-year follow-up cohort and the resulting use of rehabilitation care. This study reflects a dynamic of profound changes in obstetric and paediatric practices in France in the late 1990s, which included the creation of level III neonatal units and a neonatal care referral network between hospitals.²

Despite the substantial advances in research on fetal growth and the neonatal adaptation to extrauterine life that drove this dynamic, the current state of scientific knowledge is insufficient for ruling out the risk of brain damage closely associated with the immaturity of the brain during its ex-utero development in very preterm children. Therefore, results from prospective investigations such as Larroque and colleagues' and others³ should be integrated in a teleological perspective beyond merely neonatal care, for these investigations provide essential arguments for preventing pre maturity, which is feasible only with a two-pronged, biomedical and psychosocial approach.

Indeed, women and practitioners should be reminded that, despite medical advances, the morbid outcomes of pregnancy, especially pre maturity, are partly linked to psychosocial determinants⁴ such as pregnancy denial and precarious social situations. Advances in neonatal intensive care must not mask the need for, or be made to the detriment of, the means adopted to develop primary psychosocial prevention measures, especially since Larroque and colleagues' study found that loss to follow-up was more common in socially disadvantaged children.

References:

- 1. Larroque B , Ancel PY , Marret S Neurodevelopmental disabilities and special care of 5-year-old children born before 33 weeks of gestation (the EPIPAGE study): a longitudinal cohort study. *Lancet*. 2008; 371: 813- 20
- 2. Swyer PR Organisation of perinatal/neonatal care. *Acta Paediatr Suppl*. 1993; 385: 1- 18
- 3. Wood NS , Marlow N , Costeloe K , Gibson AT , Wilkinson AR Neurologic and developmental disability after extremely preterm birth. EPICure Study Group. *N Engl J Med*. 2000; 343: 378- 84
- 4. Ancel PY , Saurel-Cubizolles MJ , Di Renzo GC , Papiernik E , Bréart G Social differences of very preterm birth in Europe: interaction with obstetric history. *Europop Group. Am J Epidemiol*. 1999; 149: 908- 15