

## Long-term Follow-up and Outcome of Extremely-low-birth-weight (ELBW) Infants

P Agarwal,\**M Med (Paed), MD (Paed), DNB*, S B Lim,\*\**M Med (Paed), MBBS*

### Abstract

**Introduction:** Modern day obstetric and neonatal care has dramatically increased the survival of the extremely-low-birth-weight (ELBW) neonates. As the limits of viability decrease, it is of paramount importance to have reliable data on long-term morbidity. Long-term follow-up of these high-risk survivors is thus becoming an integral part of neonatal intensive care units. **Methods:** Detailed Medline search and review of leading journal articles were done to assess the current data on long-term outcome of ELBW infants. **Results:** The developmental outcome of the ELBW infant is determined by a complex interaction of medical and environmental factors acting on a developmentally vulnerable premature brain. In early childhood, 13% to 37% of ELBW survivors have a significant delay in cognitive function while 7% to 17% have neurosensory impairment viz. cerebral palsy. Advances have been made in measuring functional outcome to assess the impact of ELBW births on long-term quality of life and skills for independent living. Measuring school age outcome is an important landmark in the longitudinal follow-up of ELBW infants and most reports show high rates of cognitive impairment as well as increased incidence of learning disability and school difficulties as well as behavioural problems. The ELBW adolescent and young adult continue to lag behind in academic achievement and cognitive score. However, more than half of the ELBW survivors function within the normal range of variability and their self-reported quality of life in adolescence continues to be comparable to that of their peers. **Conclusion:** In managing ELBW infants, a holistic, systematic approach is needed to assess the degree and impact of impairment on their daily function and issues related to quality of life.

*Ann Acad Med Singapore 2003; 32:346-53*

**Key words:** Behavioural disorders, Cerebral palsy, Cognitive skills, Learning disability, Scholastic performance

---

\* Consultant

\*\* Head and Senior Consultant

Department of Neonatology

KK Women's and Children's Hospital

Address for Reprints: Dr P Agarwal, Department of Neonatology, KK Women's and Children's Hospital, 100 Bukit Timah Road, Singapore 229899.

Email: agarwal@kkh.com.sg