

# Lucina

Quality of life measures are often included in research on adults but less frequently in paediatric research. Now a quality of life measure for children (C-QOL) has been developed with the participation of mothers and 5–8 year old children in Thailand (*British Journal of Health Psychology* 2000;5:299–321). The two sets of the C-QOL, children's and carers', gave similar results. Several other health related quality of life measures for children have been developed in recent years; four are referred to in this paper.

Research about the long term effects of pain in the newborn period has been reviewed (*Nature Medicine* 2000;6:971–3). Painful lesions in newborn rats produced changes in peripheral nerve and spinal cord which lasted into adulthood but the relevance to pain in newborn babies is uncertain. Human studies suggest that pain in preterm neonates diminishes later response to pain whereas pain in term neonates increases it.

Treatment with growth hormone increases the final height of children with chronic renal failure. In Heidelberg (*New England Journal of Medicine* 2000;343:923–30) 38 children with chronic renal failure were treated. Their mean height was 3.1 SD below the mean at the start of treatment and 1.6 SD below the mean at the end of growth. Fifty children with chronic renal failure not given growth hormone had a mean baseline height of 1.5 SD below the mean and a mean final height of 2.1 SD below the mean.

In four Italian paediatric endocrinology centres (*New England Journal of Medicine* 2000;343:998–1007) a total of 79 patients with central diabetes insipidus were seen over a period of 27 years (1970–96). The median age at diagnosis was 7 years, and 42 were girls. The disease was considered idiopathic in 41 (52%). Other causes were intracranial tumour (18), Langerhans' cell histiocytosis (12), familial disease (5), head trauma (2), and autoimmune polyendocrinopathy (1). Deficiency of anterior pituitary hormones was documented in 48 patients, most commonly growth hormone deficiency but hypothyroidism, hypogonadism, and adrenal insufficiency were also associated. Changes in pituitary stalk thickness were often seen on MRI scanning.

World Health Organisation data from 1990–94 (*Diabetes Care* 2000;23:1516–26) show wide international variation in the incidence of childhood diabetes. Of 100 centres in 50 countries, the incidence was highest in Sardinia (36.8/100 000 children aged under 15/year) and Finland (36.5). In the UK the incidence varied from 15.3 in

Leicestershire to 24.0 in Aberdeen. It was low (<5.0) in some countries in South America (Colombia, Chile, Paraguay, and Peru) and Asia (Japan, China, and Pakistan), and childhood diabetes seems to be rare in Venezuela (0.1/100 000/year). No clear cut pointers to aetiology emerge from the data although ethnic and racial factors seem important. The previously suggested polar equatorial gradient did not stand out strongly from these figures.

A meta analysis of 30 studies (*Journal of the American Medical Association* 2000;284:1417–24) has confirmed an association between chorioamnionitis and both cerebral palsy and cystic periventricular leukomalacia. In preterm infants clinical chorioamnionitis increased the risk of cerebral palsy by 90% and of cystic periventricular leukomalacia by a factor of three. In term infants clinical chorioamnionitis increased the risk of cerebral palsy almost fivefold. Histological chorioamnionitis doubled the risk of cystic periventricular leukomalacia in preterm infants.

A North American study of long term (4–6 years) asthma treatment (*New England Journal of Medicine* 2000;343:1054–63) included 1041 children aged 5–12 years randomised to twice daily inhaled budesonide (200 µg), nedocromil (8 mg), or placebo. Neither treatment significantly affected lung growth as assessed by the change over time of FEV<sub>1</sub> (as percentage of predicted value) after administration of a bronchodilator. Budesonide was better than either nedocromil or placebo in controlling the symptoms of asthma.

The mean final height of 142 Danish children treated long term with inhaled budesonide for asthma (*New England Journal of Medicine* 2000;343:1064–9) did not differ significantly from that predicted from their parents' heights. Neither did those of 51 of their healthy siblings or 18 control children with asthma not given inhaled steroid.

A UK study (*Lancet* 2000;355:1293–9) has shown no increase in risk of fetal death or congenital malformation in pregnancies in which the father is employed in the nuclear industry. When the mother was the nuclear industry employee there was no increased risk of congenital malformation but there may have been some increase in risk of stillbirth or early miscarriage.

Influenza virus infection in the second and third trimesters of pregnancy is common and benign. In Nottingham (*British Journal of Obstetrics and Gynaecology* 2000;

107:1282–9) 11% of mothers had serological evidence of such infection but pregnancy outcomes were not affected. There was no evidence of fetal infection and no increase in maternal autoantibodies.

Staff on intensive care units may be more stressed than they realise. On a neonatal and paediatric intensive care unit in Zurich (*Critical Care Medicine* 2000;28:3281–8) one in eight salivary samples taken from staff every two hours and after stressful events showed a surge in cortisol concentration. On over 70% of occasions such a surge was not associated with awareness of undue stress. In individual staff members from up to 43% of samples showed a surge. The responses were not attenuated in more experienced staff unless they had worked in intensive care for over eight years.

Both genetic predisposition and maternal smoking increase the risk of congenital talipes equinovarus but the risk is much greater if the two are combined. A study in Atlanta, Georgia (*American Journal of Epidemiology* 2000;152:658–65) showed that maternal smoking in the first trimester increased the risk by 34% and a first degree family history of clubfoot increased it 6.5 times but the two combined increased the risk 20 fold.

The relationship between gastro-oesophageal reflux (GOR) and episodes of apnoea in infants is complex. Researchers in Israel (*Journal of Pediatrics* 2000;137:321–6) recorded 741 apnoeic episodes in 21 infants who had intermittent GOR and had had an apparently life threatening event. They found that the GOR and the apnoea was not temporally related in 80% of the episodes and when the two were related the apnoea almost always (94% of episodes) preceded the GOR. In that case two thirds of the apnoeic episodes were obstructive and one third mixed. It is suggested that either GOR and apnoeic episodes may have a common cause or GOR may cause changes which increase the risk of apnoeic episodes without there being a direct temporal relationship between the two.

A study in Sheffield and Gloucester (*Pediatric Infectious Disease Journal* 2000;19:854–62) has shown the safety and immunogenicity of a heptavalent pneumococcal conjugate vaccine given with routine vaccines at 2, 3, and 4 months, either as a separate injection or as a combined injection with *Haemophilus influenzae* type b vaccine. The combined injection produced lower antibody responses but both types of injection induced immunological memory with brisk response to polysaccharide vaccine at 13 months.