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LUCINA

Finnish schoolchildren of between 10 and 14 years were four times more likely to have marked thoracic kyphosis if they were left handed (*International Journal of Epidemiology* 1995; 24: 1178-81). The authors suggest that this may be because left handed writing encourages a kyphotic posture.

An important mechanism for protection against respiratory infection may be the ingestion of bacteria by airway epithelial cells and the subsequent desquamation of these cells. Recent work (Science 1996; 271: 64-7) suggests that the susceptibility of cystic fibrosis patients to Pseudomonas aeruginosa infection may result from impairment of this mechanism. Cystic fibrosis (Δ F508) epithelial cells are poor at ingesting P aeruginosa but cope normally with other bacteria and tests show that the malfunction is probably due to the altered performance of the cystic fibrosis transmembrane conductance regulator in Δ F508 cells. The susceptibility to P aeruginosa may well be made worse by the emergence of strains of the organism with defective lipopolysaccharide structure; such strains are relatively resistant to ingestion by epithelial cells.

The fathers of Swedish children with Prader-Willi syndrome were significantly more likely than the fathers of other obese children to have been exposed in their occupations to petrol (*Developmental Medicine and Child Neurology* 1995; 37: 1101-9). Toxic factors affecting men could explain the defect in the paternal gene causing the syndrome.

Patients with clinically suspected Duchenne or Becker muscular dystrophy but normal dystrophin should be tested for dystrophin associated proteins such as adhalin or merosin. Deficiencies of these proteins may present as congenital muscular dystrophies or be clinically indistinguishable from the Duchenne and Becker types but autosomal recessive. A boy with a first diagnosis of Becker dystrophy had adhalin (50 kd dystrophin associated glycoprotein) deficiency and severe cardiomyopathy (New England Journal of Medicine 1996; 334: 362-6).

The US Supreme Court shunned an appeal by a Christian Scientist mother against damages awarded to the estranged father after their son died when she chose prayer rather than conventional treatment for his diabetes (*BMJ* 1996; 312: 268-9).

Lucina was given a sad reminder of the days of her youth by a report in The Times (25 January 1996) of the finding of an infant cemetery at Lugnano in Umbria. Forty seven bodies had been buried in the 5th century AD in the ruins of a 2nd century villa. Many were fetuses and the others ranged from newborn to toddler age. The older children were buried with care in old wine amphoras or in makeshift coffins made from roof tiles but the fetuses and newborn were disposed of without care. Apparently it was customary not to show grief over, or bury with ceremony, a child dying within nine days of birth. The circumstances of the burial led archaeologists to conclude that there had been a sudden epidemic. The bones showed evidence of chronic anaemia but other evidence pointed to malaria as the probable killer.

Low blood thyroxine values in preterm babies may not be benign. In an American study of 463 babies born at or before 33 weeks and weighing 2000 g or less at birth (*New England Journal of Medicine* 1996; 334: 821-7) severe hypothyroxinaemia was associated with a fourfold increase in risk of cerebral palsy and a mean seven point reduction in mental development score at age 2. But giving thyroxine rather than triiodothyronine may not help (*BMJ* 1996; 312: 1132-4).

A detailed study of the eyes and brains of 16 children who died in Yorkshire from non-accidental injury to the brain (British Journal of Ophthalmology 1996; 80: 282-7) showed frequent retinal detachment (63%), and subhyaloid (75%), intraretinal (75%), and perineural (68%) haemorrhage. Subdural haemorrhage was found in 15. Progressively more severe injury appeared to be associated with subdural haemorrhage, intraocular haemorrhage, and retinal detachment. Choroidal and vitreous haemorrhages were associated with very severe trauma and with cerebral lacerations and intracerebral and subarachnoid bleeding. Less severe eye injuries, which might precede signs of brain injury, were often peripheral and in life would only be visible on indirect ophthalmoscopy.

A study in USA (*Journal of the American Medical Association* 1996; 275: 1001-6) has shown that young people with motor disabilities due to muscular dystrophy, multiple sclerosis, brain injury, or spinal injury, improved in many ways after being provided with a trained dog. Such dogs can open and close doors, operate switches, fetch objects, and help with dressing and bathing, as well as providing companionship. Substantial improvements were seen in psychological wellbeing, social integration, and school or work attendance and the owners needed fewer hours of human assistance.

Possible pharmacological approaches to preserving brain tissue after ischaemic damage are many. A list in Science (1996; 272: 664-6) includes 12 drugs at or approaching the clinical trial stage. They include blockers of excitatory neurotransmitter receptors, sodium or calcium channel blockers, GABA receptor agonists, free radical scavengers, nitric oxide antagonists, free fatty acid reducers, granulocyte adhesion inhibitors, and growth factors. Although mainly aimed at adult stroke they obviously have potential uses in paediatrics.

Second trimester fetal hyperechogenic bowel on ultrasound scan is associated with fetal aneuploidy, cystic fibrosis, bowel obstruction, and growth retardation. In some cases the increased bowel echogenicity could be due to the swallowing of bloody amniotic fluid (*American Journal of Obstetrics and Gynecology* 1996; 174: 839-42). Some 22% of cases of hyperechogenic bowel had significant haem pigment detected on spectrophotometric analysis of amniotic fluid.