

## ABSTRACTS OF THE CURRENT LITERATURE

### Internal Medicine

#### **Aetiology of cataracts in childhood.**

J. D. Harley and R. Hertzberg. *Lancet*, 1 : 1084, 1965.

This is a retrospective study of children with cataracts who were born during a 12-year period (1952-64) in New South Wales, Australia. In all, 136 children were assessed of which 27 were excluded on grounds of inadequate information. In the remaining 109, a convincing history of prenatal rubella was obtained in 23, family history of infantile or juvenile cataracts in 14, mongolism was present in 7 and 6 had the following disorders : cretinism, Lowe's syndrome, galactosaemia, idiopathic hypoparathyroidism, osteochondro-dystrophy, and punctate epiphyseal dysplasia.

The remaining 59 children had cataracts, inexplicable by conventional aetiological factors. 21 weighed less than 2.5 kg. at birth. The various striking nutritional factors included multiple births, gross placental degeneration or atrophy, under-nutrition, chronic anaemia, strenuous work and excessive smoking in the mother. Perinatal complications were not uncommon and in particular, infants with a low birth weight had neonatal respiratory distress, cyanosis,

collapse, or convulsions. Most of them had been treated with intensive or long continued oxygen therapy and antibiotics. All 59 children were exposed either directly or indirectly to an aromatic drug other than antibiotic agents. Other drugs like barbiturates and diamox were also associated in several cases. Seven cases had a positive family history of presenile cataracts, 21 of senile cataracts and 7 of other ocular defects. Mental deficiency or epilepsy was often present in children with low birth weight.

The authors stress the problems and fallacies of a retrospective study, and of clinical teratology. The influence of subclinical rubella, unadmitted abortifacients, genetic defects which remain unsuspected and several other factors may induce false incrimination of more obvious but innocent influences. Further, there may be developmental and metabolic factors which predispose the ocular lens to noxious agents. Although many virus diseases probably affect the lens during the first trimester, there is substantial evidence that chemical, nutritional and anoxic injuries may damage the lens during later stages of development, including post-natal. In any particular child with a cataract, there may be more than one aetiological factor.

R. K. CHANDRA.

**Results of cardiac resuscitation in 254 patients.** H. J. Smith and N. R. Anthonisen. *Lancet*, 1 : 1027, 1965.

These workers from the Royal Victoria Hospital, Montreal, Canada, report results of cardiac resuscitation in 128 patients treated during the past year. They had earlier reported observations on 126 patients with cardiac standstill. After initial external cardiac massage and artificial ventilation, the cardiac-resuscitation team passed an endotracheal tube, if necessary, an I. V. glucose infusion was got going, and the nature of arrhythmia determined with E. C. G. Ventricular fibrillation was treated by direct current shock, and slower ones and asystole by intravenous isoproterenol (0.2—1.0 mg.). All patients were given 89-200 mq. of sodium bicarbonate at the outset.

It was seen that most of the survivors were below fifty years. Ventricular fibrillation was seen in 44 (13 survived), asystole in 45 (7 survived), other arrhythmias in 24 (none survived), and unknown rhythm in 6 (3 survived). The underlying causes included ischemic heart disease in the majority (65 cases), arrhythmia (4), pulmonary embolus (8), respiratory failure (16), uremia (4), C. N. S. diseases (4), septicemia (3), coronary angiogram (2), and miscellaneous (22). Complications of resuscitation were observed in 21 of 57 routine necropsies. Rib fractures were the most common (33%). 3 patients had sustained significant visceral trauma. A metabolic acidosis and raised arterial-lactate was seen often.

The overall survival rate was 15%. The authors attribute this happy figure to three factors—ready and organized resuscitation team, attempts made in a

larger number of patients, care in a special cardiopulmonary intensive care unit after resuscitation.

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### Infectious Diseases

**The course of the parapertussis epidemic in 2 kindergartens of the district Prague 10 (Czechoslovakia).** A. Adonajlo, B. Vysoka-Burianowa, T. Pellar. *Przegl. Epidem.* 17 : 207, 1963. From *Excerpt. med. Pediat. Sect. VII.* 19 : 281, 1965.

The epidemiological survey included 342 children and the bacteriological examination included 486 cases. The majority of children had been vaccinated against pertussis, but 35% came down with parapertussis in 1 kindergarten and 47% in the other. After treatment with chloramphenicol, *B. parapertussis* was found for 1 to 6 weeks.

**Osteomyelitis due to smallpox.** W. P. Cockshott, *Zeitschrift fur Trop. med. Parasit.* 16 : 199, 1965.

In Ibadan 60 cases of variolous osteomyelitis was seen during the last three years, of which half were acute and the rest chronic. This complication occurred in children between the age 1—5 years. The frequency of this complication cannot be explained. The swelling of the bones were first noticed when the smallpox exanthema reached the stage of crusting. Commonest sites were the elbow and the ankle. Children kept their hands flexed because of a slight collection of fluid in the elbow-joint and did not use the arm nor

walked. The ankle and the hands also showed swelling. Affection of the vertebrae was not noticed. The clinical picture consisted of toxemia, high fever and high leucocyte count, symmetrical involvement of the joints. The administration of antibiotics has no effect on the course of the disease. Culture of the fluid from the joints was sterile. X-ray examination showed massive destruction of the bones and collection of fluid. The variola virus may be osteotrophic and produce osteotitis and arthritis. The latter occurs mostly in the elbow and ankle joints—causes destruction in the metaphysis and results later on in stunted growth, a serious limitation of mobility.

### Nutrition

**The soybean products as protein sources for weanling infants.** S. Muto, E. Takahashi, M. Hara, and Y. Konuma. *J. Amer. diet. Ass.* **43** : 451, 1963. From *Excerpt. med. Pediat. Sect. VII.* **19** : 276, 1965.

Three kinds of soybean products popular among Japanese, tofu (soybean curd), natto (fermented soybean) and kinako (toasted soybean flour), were tested as possible sources of protein in the solid diet of weanling infants. Twelve healthy bottle-fed infants aged 3-11 mth. were fed test diets containing 1 soybean product as a main supplementary source of protein along with milk formula. Each product was fed for a 10-day test period. Evaluation of the soybean products was based on acceptability, as well as its influence on the number and consistency of the stools, digestibility based on microscopical observation of soybean cells excreted in the feces, effects on weight

gain, serum protein level and the albumin : globulin ration and nitrogen balance. It is concluded that tofu, natto and kinako can be substituted in part for animal protein in the solid diet of weanling infants with no appreciable deleterious effects on growth, digestibility and nitrogen retention.

**Blood-serotonin activity in trisomic and translocation Down's syndrome.** E. Rosner, B. H. Ong, R. S. Paine and D. Mahanand. *Lancet.* **1** : 1191, 1965.

The authors studied 10 patients with overt clinical manifestations of Down's syndrome with karyotype showing 21 trisomy, and 7 patients with translocation mongolism. Whole-blood serotonin was assayed spectrophotofluorometrically using a modification of the method described by Udenfriend, Weissbach and Brodie. The values obtained in trisomic mongolism ranged between 45—100 microgm. per 100 ml. with a mean of 70. The corresponding figures for translocation mongolism cases and healthy controls were 125—175 (mean 147), and 120-230 (mean 181) respectively.

The authors have discussed these significant differences in the light of previous biochemical work. Diminished blood-serotonin in trisomic mongols with normal or only slightly decreased levels in translocation mongols support the hypothesis that the kynurenine pathway is accelerated by the extra gene dose provided by the additional 21 chromosome. Another explanation of these observations is that there is a three-fold dose of an inhibitor gene which delays the serotonin pathway of metabolic degradation.

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## Surgery

**Acute appendicitis in children.** F. T. Lansden, *Amer. J. Surg.* **106** : 938, 1963. *From Excep. med. Pediat. Sect. VII.* **19** : 240, 1965.

Acute appendicitis in children is rare within the first 2 years of life with a progressive incidence to the early teenage years. Normal lymphoid hyperplasia of the appendix may be an etiologic factor in appendicitis in children. The largest percentage of perforations of the appendix occurs in the pre-school age group with a prolonged history of abdominal pain prior to admission. A seasonal variation in the disease exists with a greater incidence during periods of changing weather and social activities. It is more common in male than female children. The most common presenting symptoms are abdominal pain, vomiting and low-grade temperature. Local tenderness over the appendix associated with leukocytosis and a relative increase in polymorphonuclear leukocytes with a shift to the left is usually indicative of acute, suppurative appendicitis. A history of diarrhoea and temperature above 103°F. suggests perforation and abscess formation. While antibiotics are helpful in the treatment of complications occurring with perforations of the appendix, they have no place in the treatment of simple acute appendicitis without complications. Pinworms (*O.*

*vermicularis*) do not appear to be an etiologic agent in appendicitis.

**Congenital diaphragmatic hernia.** B. Thomasson, *Ann. Pediat. Fenn.* **11** : 6, 1965.

If the diaphragmatic defect is large and the disorder manifests itself in the newborn, respiratory and circulatory embarrassment predominates. The encroachment upon thoracic organs by the herniated abdominal viscera may be severe enough to kill the infant immediately after birth. In other cases the baby gets along until food and gas distends the herniated bowel. The critical point may be reached quite suddenly and in the newborn the disorder is an emergency.

The difficulties in the diagnosis of diaphragmatic hernia in the newborn are well known. The disorder is an infrequent one, 1 in 1200—2100. A cyanotic newborn in respiratory distress should be strongly suspected of having a diaphragmatic hernia, especially if there is dextrocardia and the abdomen is unusually empty. An attempt to confirm the diagnosis by chest X-ray should be performed without delay. The successful management of the newborn with clinically manifest diaphragmatic hernia requires a well-developed fast team work between the obstetrician, pediatrician and surgeons. Most authors are for operation without delay. The authors reported 3 cases which were operated upon. One succumbed and two survived,