THE NATURAL HISTORY OF GANGLIA IN CHILDREN

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Although an understanding of the natural history of a condition is an essential prerequisite for logical treatment, little has been published on the natural history of simple ganglia in children. At Queen Mary's Hospital for Children, it has been the practice to treat asymptomatic ganglia expectantly, provided the diagnosis can be confirmed by transillumination. This present study was undertaken to determine whether or not this approach has been justified.

Patients. The hospital records revealed 63 patients under the age of 16 years presenting with ganglia. Of these, 16 were known to have been treated surgically elsewhere or at Queen Mary's Hospital, if significant symptoms had developed or there had been doubt about the diagnosis. Of the remaining 47 it was possible to contact 29, all of whom had remained untreated, and these formed the basis of this study. The mean age of the children was 7.5 years at presentation (range 6 months to 15 years): 17 were girls and 12 boys; 15 ganglia occurred at the wrist, 11 on the foot and three on the hand.

Results. At review, 22 of the ganglia had disappeared spontaneously while seven remained. The mean follow-up was 5.5 years for those that had resolved and 3.75 years for those that were still present. The mean estimated duration of the ganglia prior to spontaneous resolution was 10.5 months (range 1 month to 4.5 years), only two persisting for more than two years (Table 1). Of the seven that remained, six had been present for in excess of two years.

Discussion. The natural history of children with untreated ganglia is difficult to study. The low incidence of the condition among children (Nelson, Sawmillier and Phalen 1972), the mobility of the population and the tendency for children to be taken elsewhere for surgery all militate against a large series. In 1977 MacCollum reported on 14
children with ganglia remaining untreated after five years with spontaneous resolution occurring in nine. In 1985 Satku and Ganesh reviewed 45 out of 61 children whose ganglia had been treated surgically: in 15 the ganglia had recurred. This, and the observation that wrist ganglia in children under the age of 10 were predominantly volar, where operation might damage the radial artery, led them to recommend an expectant approach to treatment.

Our study has addressed the natural history of the condition. The observation that 22 of the 29 ganglia resolved spontaneously, 20 within two years of presentation, strongly supports the view that, providing transillumination confirms the diagnosis, management should be expectant.

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REFERENCES


GIRL WITH THREE LEGS

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Congenital duplication of a lower limb (dipodia) may involve only a part of the limb (Billett and Bear 1978; Hanley and Stanitski 1980) or the whole limb (a 'third leg') (Gould and Pyle 1897; Smillie and Murdoch 1952). It has been demonstrated experimentally that the extra limb could be the direct consequence of a mechanical factor leading to the splitting of the original limb primordium.

Case report. A baby girl, the second child of healthy, unrelated parents, was born with three legs. Her mother had no diseases during pregnancy and there was no drug ingestion or irradiation. On returning from the postnatal ward, the parents immediately demanded amputation of the additional limb and the operation was planned for the fourth month of life. Until that moment, the mother tended the child in such a way that even the closest members of the family did not notice the defect.

When the baby was admitted to the orthopaedic department examination revealed an extra limb, 20 cm in length, connected with the pelvis in the sacral region and medial part of the left buttock (Fig. 1). It was an articular type of junction, and movement in the sagittal plane was possible. At the base of the additional limb a bony fragment could be felt; this was connected with the pelvic girdle. The femur of the extra limb was almost as long as that in the normal thigh. The leg was short and arched; the foot, which had a supernumerary digit was in varus. The knee and the ankle joints were stiff, and it was impossible to produce muscular function. There was analgiesia and absence of touch perception on the whole surface of the limb. The anus was narrow, distally displaced to the right with normally functioning rectal sphincters. There was a fistula below the anus, which was, as shown by cystoscopic examination, an outlet of the additional rectum.

Radiography (Fig. 2) showed that the hip of the third limb was formed of a supernumerary ischium and iliac bone; the arrow in Fig. 2 points to the Y-shaped cartilage of the acetabulum. The femur was thin, poorly calcified, but almost normal in shape. Urography, cystography and investigation of the gastro-intestinal tract showed no anomalies.

Operation. The first skin incision widened the perirectal fistula and a cystoscope was introduced; the inside of the tube-like duct with numerous bends was lined with mucous membrane resembling rectal mucosa. The duct terminated blindly on the internal side of the left obturator foramen. The second, circular skin incision was at the base of the limb. Blood vessels were ligated and after dividing the muscles and nerves, the bones forming the acetabulum were separated. Besides the iliac bone and ischium, there was also one part of the pubic bone with a