

# Special Report: The David Smith Workshop on Malformations and Morphogenesis—August 1986, Burlington, Vermont

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A variety of new clinical syndromes were described at this meeting and a number of well-known conditions were revisited. The hypertelorism hypospadias (BBB) syndrome and the hypertelorism dysphagia (G) syndrome were discussed in some detail; the suggestion that they may actually be alleles or the same condition was supported by much of the discussion.

A number of the papers presented suggested that pigmentary abnormalities in the presence of mental retardation with or without additional congenital anomalies may be an indicator of chromosome mosaicism. This finding has been well demonstrated in trisomy 12p mosaicism (Pallister-Killian syndrome); pigmentary

streaking is also seen in diploid/triploid/mixoploidy. A number of unusual patients were presented in detail at the meeting. Many of these patients had normal leukocyte chromosome studies, but chromosomal mosaicism was apparent in fibroblast chromosome studies. Hypomelanosis of Ito (streaky areas of decreased pigmentation with asymmetry in the size of the two sides of the body) is a syndrome deserving further study; it was suggested that it may represent chromosomal mosaicism. The take-home message was that fibroblast cultures should be strongly considered for patients who have normal peripheral blood chromosomes, pigmentary abnormalities, mental retardation, and short stature with or without additional anomalies.

Several new observations were made concerning neural tube defects. Careful autopsies of children

who had spina bifida with no additional congenital anomalies showed marked abnormalities of blood vessels to the affected part of the spinal cord and vertebral area. It is not clear whether this change is a primary or secondary disturbance. A distinction can be made between high neural tube defects (primary neurulation defects) and lower neural tube defects (canalization defects) in terms of the recurrence risk for having another child with a neural tube defect. Lower neural tube defects appear to have much less risk of recurrence for the family. Brain stem auditory evoked potentials may be a useful way of determining whether or not a particular patient with meningomyelocele has abnormal brain development.

The recent film and play about John Merrick, the "Elephant Man," focused a great deal of attention on neurofibromatosis, which was addressed in an interesting presentation. The "Elephant Man" may not actually have had neurofibromatosis. Review of the autopsy findings on John Merrick and the historical information that is available today strongly suggest that it is much more likely that he actually had the Proteus syndrome, a condition described by Wiedemann and characterized by ham-

artomatous overgrowth.

Several presenters reviewed the accuracy of prenatal ultrasonic diagnosis for congenital anomalies and suggested that the technique may be only 50% accurate unless one focuses on a particular body area or knows what to suspect in a particular area. Thus, the physician should alert the ultrasonographer if there is an area of concern when careful examination is indicated. It was strongly recommended that fetal karyotyping of amniocytes be done when a structural abnormality is found on ultrasound during the third trimester. Indeed, a chromosomal abnormality is present in as many as one third of cases in which congenital anomalies are detected during the third trimester. Knowing that a chromosomal abnormality is present may alter management.

A new syndrome that may be quite common was described. The urofacial syndrome consists of obstructive urologic problems seen in association with abnormal facial muscular movement, so the child's smile looks more like a grimace. Intelligence is normal, and the condition probably has an autosomal recessive inheritance.

It would appear that Pena Shokeir syndrome (an autosomal recessive syndrome characterized by congenital contractures and hypoplastic lungs) is not a diagnosis but rather a phenotype that results from decreased intrauterine movement of the fetus and is attributable to many different causes. Thus, when any of the features of the Pena Shokeir phenotype (intrauterine growth retardation, congenital contractures of limbs, craniofacial anomalies, hypoplastic lungs, short umbilical cord, or polyhydramnios with short gut syndrome) is present, physicians should look for the other signs in the newborn infant. A variety of pathologic findings have been seen in babies diagnosed as having Pena Shokeir syndrome. However, the reported familial cases are all probably autosomal recessive disorders, and prenatal diagnosis should be offered for any future pregnancies.