

SYMPUS APUS

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Among the foetal monstrosities, deformities of the legs are not infrequently seen. Carter records 3 such cases in a series of 219 congenital malformations. The fusion of the lower extremities is the characteristic feature in a rare but well defined group of monsters called Sympus. According to Proshek, they form roughly 1 per cent of all monstrosities. There are three distinct varieties in this group:—

(1) Symele or Sympus Dipus—where both the lower limbs are completely fused and terminate in a double foot, the sole pointing forwards.

(2) Uromele or Sympus Monopus—Both the lower extremities are united incompletely and terminate in a single foot, often incomplete, its sole being directed to the front.

(3) Sirenomele or Sympus Apus—in which there is a very incomplete union of both the lower extremities which terminate in a stump without a distinct foot (Figures 1 and 2).

Of these three varieties, the last is said to be the most frequent and Sympus Dipus, the rarest. Including the present case, there are 2 specimens of sympus apus in the Museum of the Stanley Medical College, Madras. Resnick mentions that since 1800 only 13 cases of sympus dipus are reported in the literature.

Etiology.

The exact cause of this malformation is not understood. Defects in the germplasm or mechanical causes due to lack of liquor amnii have been suggested among the probable causes. St. Hilaire, arguing on the basis of the law of affinity of "the like for the like", explained that fusion of the limbs is due to approximation of the side plates from which the limbs are developed. Weigert on the other hand points out that a single artery (the omphalomesenteric artery) in the umbilical cord is a feature present in almost all cases of sympus and is peculiar to this type of monstrosity only. He believes that fusion of the limbs and the associated maldevelopments are only secondary to impaired blood supply thus produced.

Case Report.

Mrs. L., 35 years, 7th gravida, was admitted into the hospital at 9.30 p.m. on 6-1-1951 at full term with history of being in labour for 4 hours and draining liquor amnii since the pains started. She had had six spontaneous full term deliveries, of which 4 were alive and 2 had died in infancy. Her last child was aged 3 years. There was no history of monstrosities during previous pregnancies nor was there any such evidence in her family his-

tory. She had not suffered from any acute illness or exanthemata during the early period of the present pregnancy. On examination, no developmental abnormality could be detected in her. The uterus was full term and was acting moderately. The presentation was breech, position R.S.A., and foetal heart 130 per minute.

Three hours after admission, a deformed peculiar stump like structure was presenting at the vulval outlet. With good pains, the stump was followed by the 'breech,' and the shoulders, the after-coming head being assisted during the delivery. The foetus weighed $3\frac{1}{2}$ pounds but died in a few minutes after birth. The placenta, which was delivered 10 minutes later, appeared normal. The puerperium was afebrile and the patient was discharged from the hospital six days after the childbirth.

The head and the trunk of the foetus appeared normal as in a child born at full term. No external genitalia or anal or urethral openings were present. There was one accessory digit in the right hand. The length of the foetus was 15 inches. The incompletely formed lower limbs (devoid of feet) had fused to form a stump measuring $5\frac{1}{2}$ inches, and was held at an angle of about 135 degrees to the abdomen. No other abnormality could be detected on external examination. Partial autopsy revealed some interesting peculiarities. The left lobe of the liver was large, as big as the right one. Spleen was absent, its place being usurped by the enlarged liver. The duodenum was continued as coils of small intestines (with a mesentery), the terminal portion of which,

ending blindly, was attached by means of the fibrous remnant of the omphalomesenteric duct of the umbilicus. The last 18 inches of the ileum which was present had distended with meconium and resembled the colon. But the hindgut was not formed. The caecum, appendix and the colon were absent. No rectum or anal opening was present. The kidneys were small and rudimentary with thin atrophic ureters which when traced down fused with connective tissue around the rudimentary sex glands. The bladder and the urethra were not present. On the left side, the testes was slightly more developed and was found in the inguinal region; but on the right, it was a small and rudimentary intra-abdominal structure. Dissection in the region of the pelvis revealed that both the iliac bones were present and that the ischium and pubis had fused in the midline to obliterate the pelvic cavity. The femora had fused well to form one bony structure. A small stump of the tibia was present. The umbilical cord on histological examination showed one artery and a vein.

Comments.

This group of monsters usually adopt breech presentations. Of the 13 cases of Sympus Dipus reported so far, in 5 the delivery was as breech, but in the rest no mention was made regarding the presentation. In addition to the fusion of the lower limbs, this type of monstrosity is characterised by absence of external genitalia and of urethral and anal openings. The incomplete development of the alimentary system (formed upto that point on the midgut from where the

Meckel's diverticulum arises) as well as a rudimentary urinary system, without a bladder or urethra, precludes extra-uterine existence for the foetus. Antenatal diagnosis is not easily made unless a radiograph of the abdomen is taken and the fusion and the defects in the lower extremities are visualised.

Summary.

Sympus apus is a rare type of monster. A case report and partial autopsy findings in such a malformation is given.

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Fig. 1



Fig. 2

