A CASE OF CONGENITAL SCOLIOSIS DUE TO THE SUPPRESSION OF HALF A VERTEBRA

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Congenital scoliosis is a rare condition and very little attention had been paid to this and other congenital malformations of the skeleton until the discovery of the X-rays. A few specimens of this deformity, however, have been preserved in museums.

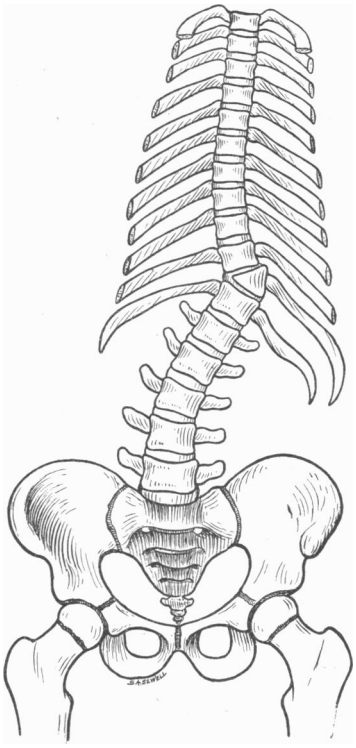
According to Whitman (1) congenital scoliosis may occur in infants otherwise normal and due apparently to a constrained attitude before birth. It is usually associated, however, with cervical ribs, elevation of the scapula, etc., which conditions can hardly be explained on the ground of posture alone. The deformity may be apparent at birth or it may not be observed until later years when examination by the X-rays shows supernumerary, deficient or fused vertebrae.

The following is a short description of the case: John H. first came under observation at the age of six years; he had a well-marked scoliosis with the convexity to the left in the lower dorsal region; he had compensatory curves above and below. His mother stated that his back had never been straight but she had not sought advice about it as his bowels had always been a constant source of trouble. Ever since birth the child required castor oil to obtain a motion. He was a typical case of congenital idiopathic dilatation of the colon and had been admitted to King's College Hospital on several occasions because of chronic obstruction in the colon. Skiagraphic examinations with opaque meals and enemas demonstrated a very dilated sigmoid colon and rectum, the sigmoid taking up almost the whole of the abdominal cavity. Repeated X-ray examinations of the spinal column clearly revealed a wedge-shaped half vertebra in the region of the eleventh thoracic vertebra on the left side. There were only eleven ribs on the right side while on the left twelve were present, the eleventh articulating with the half vertebra (see drawing reconstructed from skiagram).

This case seems to be one of suppression of the right half of the body of the eleventh thoracic vertebra along with the eleventh rib on the right side. This deformity must arise very early in intra-uterine life and is no doubt due to an error in segmentation.

Fitzwilliams (2), in a somewhat similar case in 1908, was inclined to consider that the bone was "atavistic" and due to a persistent hypochordal cartilage.

Fleury (3), in his Parisian thesis for the M.D., gives an account of a case of congenital scoliosis, with a skiagram of the spine; he considered the condition was due to a supernumerary vertebra between the eleventh and twelfth dorsal vertebrae. A year later Mouchet and Broca (4) pointed out that in Fleury's case the scoliosis was due to the suppression of the left side of the body of the twelfth dorsal vertebra and of the twelfth left rib.



Rokitansky (5) as long ago as 1844 found four supernumerary half vertebrae in the spine of a woman aged 46 years. Unfortunately complete details with regard to the number of vertebrae and ribs were not stated.

Mouchet (6) records the case in a girl aged two years where a skiagram showed a supernumerary wedge-shaped imperfect vertebra on the left side between the first and second lumbar vertebrae. Twelve ribs were present on each side which articulated normally with twelve thoracic vertebrae.

It is interesting to note in this case the association of congenital idiopathic dilatation of the colon with the defect in the osseous system. It is a well-known fact that congenital defects of the central nervous system are frequently associated with deformation of the skeletal system and possibly the dilatation of the colon may have been related to some imperfection in the development of that part of the spinal cord associated with the origin of the splanchnic nerves which are given off at the level of the half-vertebra.

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