COXA VARA

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VI.

COXA VARA.*

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The two cases of coxa vera here presented may perhaps be of aid in settling the still open questions of etiology, pathology, and classification. They are marked types of two widely differing classes of cases.

CASE I.—Salvator T., aged eleven years. Family history negative. The boy's parents say that except for a mild case of measles he never had a sick day in his life. He is apparently in perfect health, without a sign of rickets or other disease either acquired or hereditary. He is trimly built and stands like a martinet on parade, as will be seen in the picture, Fig. 1.

Two years ago his parents observed that he was developing a concave back and a waddling gait. The deforming symptoms have not been accompanied by any impairment of health or pain of any kind. There remains about one-half of normal abduction and three-fourths of normal flexion in both hips. Except for these limitations movement is entirely free. The general appearance is the same as in double congenital dislocation of the hips. The skiagram, Fig. 2, shows the necks of both femurs to be deflected downward to an angle of 45 degrees—just about as far below the right angle as the normal is above the right angle. Except for this deflection downward the outlines and general appearance of the shafts, necks, and heads are absolutely normal.

I have called this an idiopathic case of coxa vara. To say that it is a local exhibition of rickets in the necks of the femurs without any general symptoms, or that it is a loss of proper adjustment between growth and weight pressure, during the growing period, is only to advance theories without any proof behind them.

CASE II.—George L., aged twenty-four years (Fig. 3). Family history negative. He is undersized, his height being 5 feet 4

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inches, weight 130 pounds. His health is good. He had what was said to be diphtheria at the age of fourteen years and when convalescent a limp to the right became apparent, followed by a steadily progressive shortening of the right leg. The right leg has an adduction deformity of 30 degrees and rotation out of 40 degrees, with 3/4-inch adduction shortening and 3/4 inch of real shortening as compared with the left leg.

The skiagram (Fig. 4), shows the extracapsular or outer half

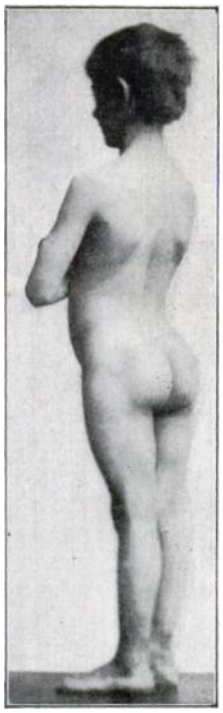

FIG. 1, CASE I.—Salvator T., Idiopathic coxa vara.

of the neck of the right femur to have an inclination downward of 65 degrees from its normal position and this inclination gradually increased in the intracapsular neck until it reaches an acute angle with the shaft. This distortion of the neck has reversed the direction and dislocated the head of the femur over the lower rim of the acetabulum until only the upper margin of the head rests within the socket. The upper half of the head has lost its rounded contour and the upper half of the acetabulum appears to be filled

with adventitious material. This is a remarkable picture of distortion from the normal shapes and relations in and about the right hip-joint.

The patient calls the left his well leg, but examination reveals

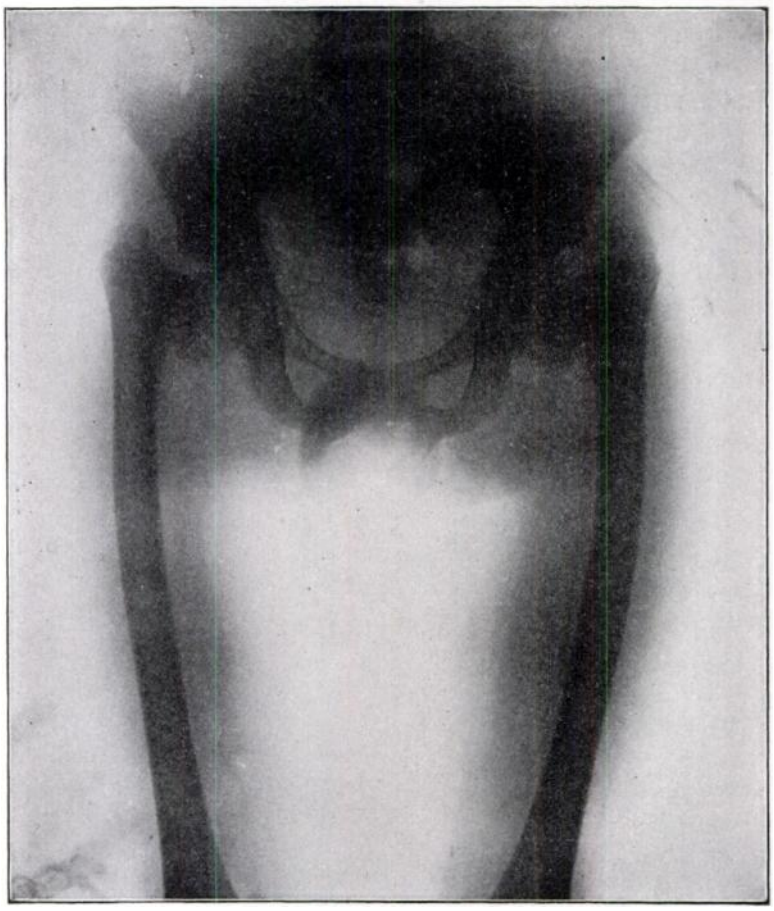

FIG. 2, Skiagram of Case I.—Idiopathic coxa vara.

a coxa vara bend of the neck downward to a horizontal line, giving a real shortening of the left leg of over 3/4 inch. The skiagram besides confirming the physical evidence that the head of the left femur is depressed so that the neck lays in a horizontal position, also shows that the head is enlarged and broadened into

a mushroom shape, and that the left acetabulum is enlarged and broadened for the accommodation of the mushroom head.

This is a case of arthritis deformans following a diphtheritic or other tonsillar infection causing the heads and necks of the femurs to assume somewhat the pliability of wax. The deformity has been steadily progressive for about nine years. It is only in the last year that it may have become stationary. As soon as we are

FIG. 3. CASE II.—George L., Coxa vara of arthritis deformans.

satisfied of this we will do an osteotomy for the correction of the adduction deformity of the right leg.

The many years of painless progress of the deformities of the two types just described, occurring in young people otherwise in good physical condition, and with locomotion only partly impaired, renders any treatment that restricts out of the question. The patient will not submit to it and the only concession to be gained

is a promise to permit an osteotomy when it can be shown that the progress of the deforming disease has ceased.

Incident upon the correction of 1,000 case of knock-knee, bow-leg, and other rachitic deformities of the legs by rapid osteoclasis, I have seen thirty-two cases of coxa vara and three cases of coxa valga. All of these have been in children from three to six years

FIG. 4. Skiagram of Case II.—Coxa vara of arthritis deformans.

of age. Frequently the coxa vara or coxa valga was not apparent until after the correction of the more conspicuous deformities. Rachitic coxa vara is usually associated with bow-leg, and rachitic coxa valga with knock-knee. Coxa valga has been observed twice on the side opposite to the unilateral knock-knee. In each of these cases the patient stood with the unaffected leg abducted.

I have seen four cases of traumatic coxa vara in adults. In each of these cases the skiagram revealed a fracture line.

I have seen, besides the case above described, two cases of coxa vara of arthritis deformans and one case of congenital coxa vara in infancy.

There are probably types of the deformity that I have not seen, but I object strongly to the listing of tuberculosis as a cause of coxa vara, as is done by some German authors. The breaking down of the head and neck of the femur that is so commonly observed in tubercular hip disease has no place in this list.

In my experience rachitic coxa vara has been greatly in excess of all other types combined. This undoubtedly is by reason of the special line of work in the correction of rachitic bow-legs and knock-knees in which I have been largely engaged. The treatment of the deformity in its progress in youth and in adults is exceedingly unsatisfactory. These coxa-vara patients will not submit to either mechanical or rest treatments. But when the disease has run its course and the bone has become permanently stationary, osteotomy for elevation of the head of the femur and for the relief of the adduction deformity gives good results.

When we better understand the etiology and pathology of the deformity there will undoubtedly cease to be an idiopathic coxa vara of youth and early manhood.

DISCUSSION.

DR. DAVIS, discussing DR. Blanchard's paper, suggested that possibly Dr. Blanchard's firse case was analogous to a case of Madelung's disease, or subluxation of the wrist, in which the wrist becomes distorted, especially the lower end of the radius, which becomes bent. This disease occurs in adolescents and young adults; if it is not due to rickets, one hardly knows what else causes it. Dr. Davis thought that Dr. Blanchard's case was one of a similar character.