

SPONTANEOUS RECOVERY IN COXA VARA INFANTUM

By

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Our knowledge of coxa vara infantum (*syn.* coxa vara congenita, developmental coxa vara) is incomplete in many respects and, as the condition is fairly rare, no single orthopaedic surgeon has the opportunity of seeing more than a relatively limited number of such cases. The largest series on record are those of *Zimmermann* (1938), consisting of 65 cases treated at the Orthopaedic clinic, Munich, of *Johanning* (1951) consisting of 42 cases from the University Orthopaedic Hospital, Oslo, and of *Magnusson* (1954) consisting of 67 cases seen at the Orthopaedic Clinic, Stockholm. *Mesurier* (1948) gives the incidence of the condition in relation to that of congenital dislocation of the hip as 1:14, and according to *Johanning* (1951), it occurs in only 1 out of every 25,000 live births.

Untreated cases usually progress steadily from early infancy to adolescence, often with consequent true pseudarthrosis (*Babb, Ghormley & Chatterton* 1949, *Johanning* 1951). According to *Mesurier* the final deformity varies widely in untreated cases. As a rule it progresses to the extreme limit but occasionally not beyond the right angle. *Bade* (1933) stated that "eine Wiederaufrichtung des Schenkelhalses findet bei coxa vara infantum nicht statt". Some investigators such as *Zimmermann* have reported practically complete recovery by plaster and traction in early cases. The value of conservative treatment has, however, been denied by *Nilsson* (1929), for example, who stated that even in early childhood prolonged energetic traction failed to produce even the slightest correction of the collo-diaphyseal angle.

Recently the author had the opportunity of observing a case of coxa vara infantum in which the course deviated from that usually seen. It is described below.



Fig. 1.

Roentgenogram of right hip 24/11 1945.

A girl aged 3 years was admitted to the Orthopaedic Department, Hälsingborg, in November 1945, because of right coxa vara. Roentgenographic examination on admission (Fig. 1) showed a typical coxa vara infantum with a distinct triangular fragment and a collo-diaphyseal angle of about 90° . Two months' traction failed to produce any improvement in the roentgenographic appearance of the hip (Fig. 2). Later subtrochanteric osteotomy was proposed but owing to the low age of the child, expectant treatment was decided upon, and the parents were requested to return with the child one year later for re-examination. However, this request was ignored by the parents and the child was not seen again until she was 11 years old. In the meantime the child had received no treatment, nor had she intentionally spared the hip. The roentgenogram of the hip in July, 1954, (Fig. 3) was surpris-



Fig. 2.

Roentgenogram of right hip 17/1 1946.



Fig. 3.

Roentgenogram of right hip 13/7 1954.

ing: the femoral head and neck were of practically normal appearance. The bones were of normal density. The collo-diaphyseal angle was 130° (healthy side 135°) and the epiphyseal angle $30^{\circ 1}$ (healthy side 25°). The head showed no appreciable deformation, but as compared with the healthy side it was 2 mm less in height and the lower medial corner of the femoral neck proximally was very slightly malformed and a little more prominent.

Such spontaneous recovery is undoubtedly extremely rare, and a search of the literature failed to reveal earlier reports of such cases.

It is true that *Johanning* (1951) states that spontaneous recovery may occur in exceptional cases. In 2 cases he had observed a spontaneous decrease in the epiphyseal angle. In one of these cases he gave a more detailed description and stated that "the epiphyseal line does not run so steeply, forming an angle of only 30° ". One year later roentgen examination showed that "the angle with the epiphysis continues to be only 30° ". This, however, cannot possibly be an example of a decrease in the epiphyseal angle. It only shows that the angle had not increased.

¹ Angle between the epiphyseal line and the horizontal plane.

Careful perusal of the record sheets at the Orthopaedic Department, Hälsingborg, failed to reveal any other case of spontaneous recovery. This is of less importance because the routine treatment of coxa vara infantum at the Orthopaedic Department has always consisted of subtrochanteric osteotomy.

No acceptable explanation can be offered for the exceptionally good restitution in the case under discussion. It must surely be assumed that the pathological process responsible for coxa vara infantum had for some reason or other healed at such an early age that remodelling processes in the region of the femoral head and neck could start at an unusually favourable time. But then again no explanation can be offered for the exceptionally early healing of the pathological process.

Roentgenographic examination at relatively short intervals would have been of particular interest in this case, and it is unfortunate that no roentgenographs of the hip were taken between the fourth and twelfth year.

It should be mentioned that the writer does not consider this rare spontaneous recovery from coxa vara infantum an argument for conservative treatment, but like most orthopedic surgeons, advocates early subtrochanteric osteotomy.

SUMMARY

Description of a case of coxa vara infantum with practically complete restitution without treatment.

RESUME

Description d'un cas de coxa vara infantum avec guérison pratiquement complète sans traitement.

ZUSAMMENFASSUNG

Beschreibung eines Falles von coxa vara infantum mit fast vollständiger Wiederherstellung ohne Behandlung.

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