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INTERESTING CASES OF CONGENITAL HIP DISLOCATION AND SUBLUXATION IN THE NEW BORN BABIES

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In the period of 1958-1961 the author examined personally 4300 newborn babies among whom 22 had a positive Ortolani's sign.43

The cases described in this paper are included in the 4300 examined newborn babies, but not among the 22 cases in whom a positive Ortolani's sign was detected.

CASE PRESENTATION

H. G. The newborn baby girl delivered spontaneously in occiput position was the fifth child. There was no history of congenital hip dislocation (C.H.D.) in the families of her father (who is of German descent) and her mother (who is of Italian parentage).

This baby's hips were examined on the second day after birth. Asymmetry of the skin folds was not noted. Ortolani's sign and abduction of the thighs were negative; however, extreme looseness of both hips was detected. Telescoping of both hips in antero-posterior and infero-superior directions was possible without the feeling of any resistance. Both hips could be dislocated by the simple motion of the baby's body, while the lower extremities were held. The hips were relatively stable only in the frog leg position with the thighs abducted at 75-85°. Good radiographies were very difficult to obtain, because of the difficulty of keeping the baby quiet. Every motion of the body would produce dislocation of the hips. The radiographies showed increased acetabular angle7 above 28°, and the push-pull radiographies of both hips showed clearly a dislocated hip on the pushed side.

Treatment started with the application of the Frejka pillow on the third day after birth. Each day while in the hospital nursery the baby's hips were examined with the applied Frejka pillow and always found to be dislocated. On the seventh day after birth, the bilateral plaster hip spica was applied with the hips in the frog leg position abducted at 80°. The child had to be sedated during the plaster cast application, otherwise the hips could not be kept well reduced. The plaster cast did not cause any visible discomfort or inconvenience to the baby and was removed 3 months after its application. At that time clinical examination of the hips was negative. Radiographies showed considerable degree of antversion of the proximal part of the femur bilaterally. The Frejka pillow was applied and kept for two months after which time clinical examination of both hips continued to be negative. Radiography showed well developed acetabuli, with great amount of antversion of the proximal femoral end. (Figures 1-9).

SECOND CASE

This case is one of a group of 5 newborn babies in whom the author detected an interesting clinical sign. This group of newborn babies was examined

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Figure 1 and 2
H. G. 2 days old. Radiographies of the hips in antero-posterior and frog leg position show an increase of acetabular angle.

Figure 3
Radiography of the same patient in whom the left hip was pushed cranialward and the right hip was pulled caudalward. Note complete dislocation of the left hip.

Figure 4
Radiography of the same patient in whom the right hip was pushed cranialward and the left hip was pulled caudalward. Note complete dislocation of the right hip.

Figure 5
Radiography of the same patient in whom both hips were pushed cranialward. Note dislocation of both hips.
Radiographies of the same patient in antero-posterior and frog leg position views at 3 months of age when the plaster spica was removed. Note the conspicuous amount of antversion of both proximal ends of the femur. Treatment with the Frejka pillow began.

Radiographies of the same patient in antero-posterior and frog leg position views at 5 months of age. Note well developed acetabuli and great amount of antversion of the proximal femoral ends bilaterally.

with the usual technique⁴ for Ortolain’s sign. During the examination, the newborn baby was supine on the examining table with the thighs flexed at 90°. The author’s hand exerted moderate pressure on the knee downward to transmit pressure to the femur and hip. At that moment the examiner had the feeling of a smooth elastic-like motion of the femoral head rather than the sign of “click”. Keeping the same amount of pressure the examiner abducted the thigh to 85°. In that phase of the examination neither resistance nor “click” were felt. The same sign was detected bilaterally in the 5 newborn babies, who were followed by the author in the Pediatric and Orthopedic Clinics.

P.M. was a newborn baby girl delivered spontaneously in the occiput position, the second child of a Polish family. On the second day after birth the author examined the baby’s hips and detected the above described sign bilaterally. Radiography was done and showed increased acetabular angle above 28°. (Figure 10, 11). The author was informed by the mother that there was no history of C.H.D. in her
P.M. Newborn baby girl 2 days old. Radiographies of the hips in antero-posterior and frog leg position views show increased acetabular angle bilaterally.

or her husband's family. Their first daughter, 1½ years of age, was wearing an abduction splint for congenital subluxation of the hips (C.H.S.) bilaterally, and in treatment elsewhere. At one year of age C.H.S. was discovered accidentally on radiography of the pelvis for kidney and bladder stones in another hospital.

Our patient was re-examined at two months of age, at which time the hips were negative clinically, but the radiographies still showed an increased acetabular angle. (Figures 12, 13). Treatment of the baby's hips was not begun yet.

At 4 months of age the hips were negative clinically. The radiographies still disclosed an increased acetabular angle and the beginning of subluxation of both hips. (Figures 14, 15). The patient was not examined for the next 6 months, because the parents failed to keep appointments.
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Figure 14 and 15
Radiographies of the hips of the same patient at 4 months of age still show increased acetabular angle and the beginning of the hip subluxation bilaterally.

Figure 16 and 17
Radiographies of the hips of the same patient at 10 months of age show subluxation of both hips.

Figure 18 and 19
Radiographies of the hips of the same patient at 12 months of age show increased degree of subluxation of the hips bilaterally.
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Figure 20 and 21
Radiographs of the hips of our patient's sister at 2½ years of age show bilateral subluxation of the hips.

At 10 months of age the hips were negative clinically, and the radiographies showed subluxation of both hips. (Figures 16, 17). The patient was not treated. At the request of the parents the author examined the older daughter, now 2½ years of age, and still in treatment elsewhere with abduction apparatus for C.H.S. The hips were negative clinically and the radiographies showed C.H.S. bilaterally.

Our patient was examined for the last time at 12 months of age, at which time the hips were negative clinically, and the radiographies revealed increased subluxation in both hips. (Figures 18-21). The patient had not begun to walk. The author recommended the beginning of the treatment with abduction apparatus.

DISCUSSION

The author believes that all these cases deserve full attention. In the first case Ortolani's sign and limitation of abduction of the thighs were negative. The author thinks that the reason the hips dislocate so easily is a consequence of a very shallow acetabulum with well rounded ridges, enlarged articular capsule, long or absent ligamentum teres and deformed femoral head. The clinical picture of this case is not similar to C.H.D. known as atypical, teratologic or embryologic. We believe that in our case the best way of treatment was the application of the plaster hip spica in frog leg position. The application of the Frejka pillow as initial treatment was shown to be inadequate and dangerous, because of fixation of both hips in the dislocated position. In similar cases the plaster hip spica should be applied very shortly after birth (perhaps on the second or third day), to avoid trauma of the easily dislocating hips. Having only one case of this kind of C.H.D. among 4300 newborn babies, we believe it to be rare.

We have no experience with a similar case of C.H.D. detected at birth with the same clinical and radiological signs and not treated; however, we assume that delayed treatment would not give good results in so short a time.

The second group is characterized by the sign which predicted the development of C.H.S. We were unable to find it described in the literature. We do not know
the pathology of this sign which was present at birth and disappeared within the first two months.

We detected this sign in 5 newborn babies 3 of whom developed subluxation of both hips of various degrees, depending upon the age of the patient. The oldest one is the case described here. However, all cases are under regular clinical control.

A comparison of the clinical and radiological signs in the hips of our patient and those of her older sister are extremely interesting. It is our prediction that the hips of our patient will produce the same picture as those of her sister.

CONCLUSIONS

1) The described case of C.H.D. is very rare showing a ratio of 4300:1.

2) In such a case the diagnosis within a few days after birth and immediate treatment with the plaster hip spica is of paramount importance.

3) The examiner should be alert and search for the sign which could predict C.H.S. and evaluate it when found.

4) The variety of signs by which congenital hip pathology could be detected shows that the hip examination of the newborn babies is justified and requires a certain manual skill as well as complete knowledge of all signs.

SUMMARY

Six cases, one of C.H.D. and 5 with an interesting sign detected in the hips, found during the examination of 4300 newborn babies by the author, are described.

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