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Contributors

Willard, De Forest, 1846-1910.
Royal College of Surgeons of England

Publication/Creation

[Philadelphia] : [publisher not identified], 1900.

Persistent URL

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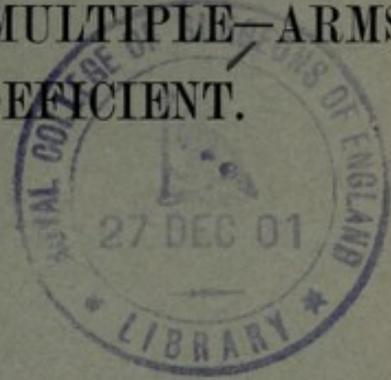
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DEFORMITIES, CONGENITAL MULTIPLE—ARMS
AND LEGS—FEMURS DEFICIENT.

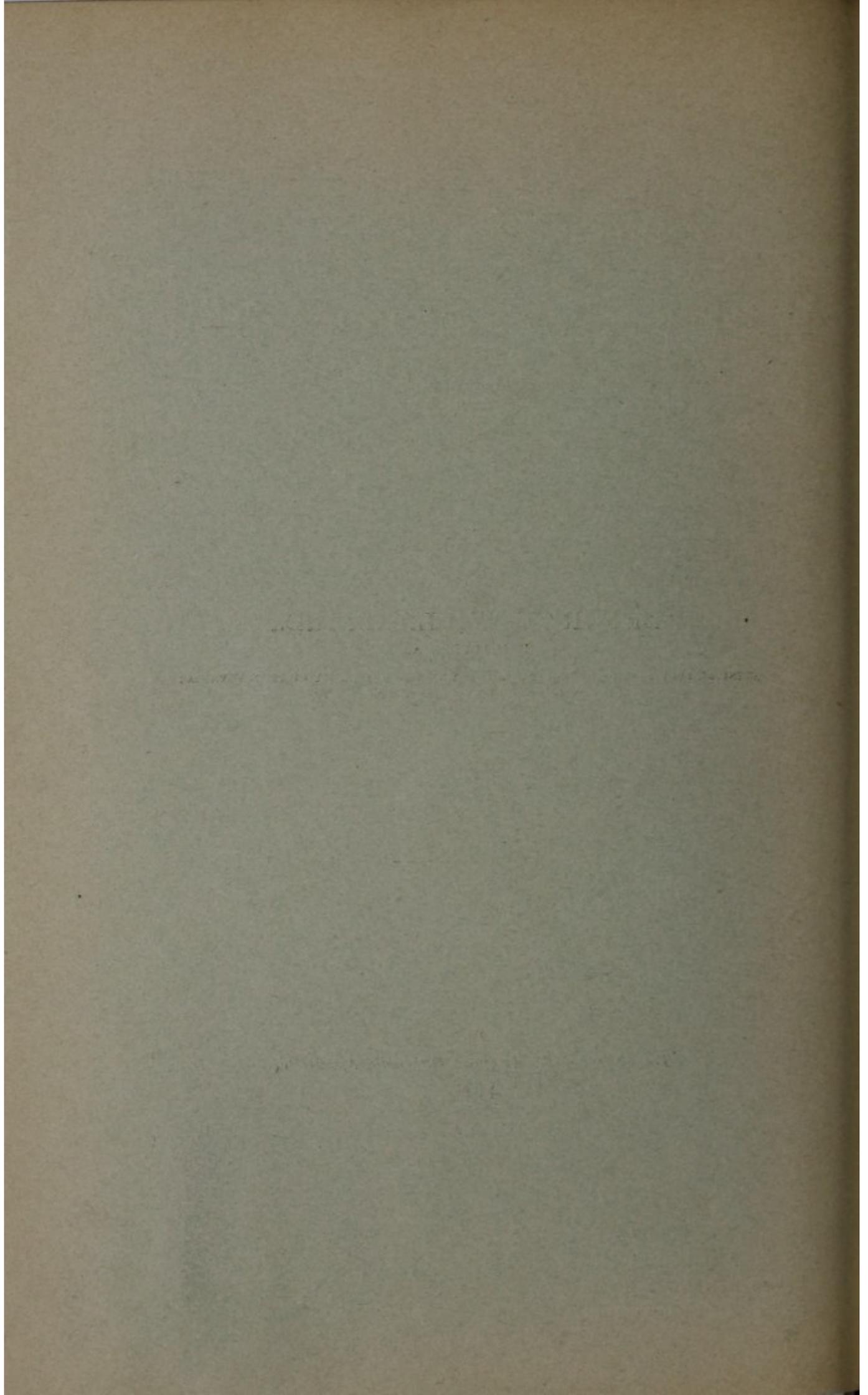


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From the
Transactions of the American Orthopedic Association,
1900.





DEFORMITIES, CONGENITAL MULTIPLE—ARMS AND LEGS—FEMURS DEFICIENT.

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THE subject of this sketch was, when first seen, six years of age. His mother had previously had one stillborn child, perfectly formed. There were no deformities in either of the parents' families. The father had had several children by two previous wives; no deformities. Labor with this child was normal; no known injury during pregnancy; no known maternal impressions. Head and trunk of the child were naturally developed, and of good size, rather large. As will be seen by the photograph, his position standing was in the squatting posture, with the buttocks only four and one-half inches from the floor. (Fig. 1.) The thighs, from the congenital deficiency of the femurs, were so short that the distance from the perineum to the inner condyle was only one-half inch on the left side and one inch on the right. From the anterior superior spine to the knee when flexed, three inches; extended, four inches. The right acetabulum was deformed so that the distorted upper end of the shaft of the femur slipped upon the ilium. The head and neck of the femurs were poorly developed. The junction of the thigh to the body presented a peculiar appearance; there was no groin fissure; the perineum was very wide and deep, and the anus was near the posterior border of the scrotum. The scrotum in standing hung opposite the middle third of the tibia. By muscular effort he could for a moment or two straighten his knees and hips so as to raise himself five inches, but immediately sank again into the squatting posture with the posterior part of his thighs resting upon the calves, in which position

he walked. The total height was twenty-nine and one-half inches, of which the body constituted twenty-four and one-half inches. The best position to which he could bring his thighs was to 135° , and then only by the production of a lordosis. Right leg from

FIG. 1.



Congenital deficiency of bones. Best possible walking position. Buttocks four and one-half inches from floor.

the knee to the sole of the foot was ten and one-half inches ; left, eight and one-half. The left tibia was bowed anteriorly, with apparently cicatricial tissue at its greatest point of anterior curve. The left patella and fibula were absent. Left foot was in the

equino-valgic position as he walked upon the tip of the three toes, bending the ankle badly inward at each step. The first toe was large and distorted, apparently a conjunction of the first and second; the third and fourth were present, but the fifth was absent. The

FIG. 2.



Congenital absence of fingers and toes.

right foot had four toes and four metatarsal bones, the outer one being a fusion of the fourth and fifth, the middle toes being webbed. (Fig. 2.)

When the boy was first seen, skiagraphy had not been discovered, but I have recently had an X-ray representation made of the hands

FIG. 3.

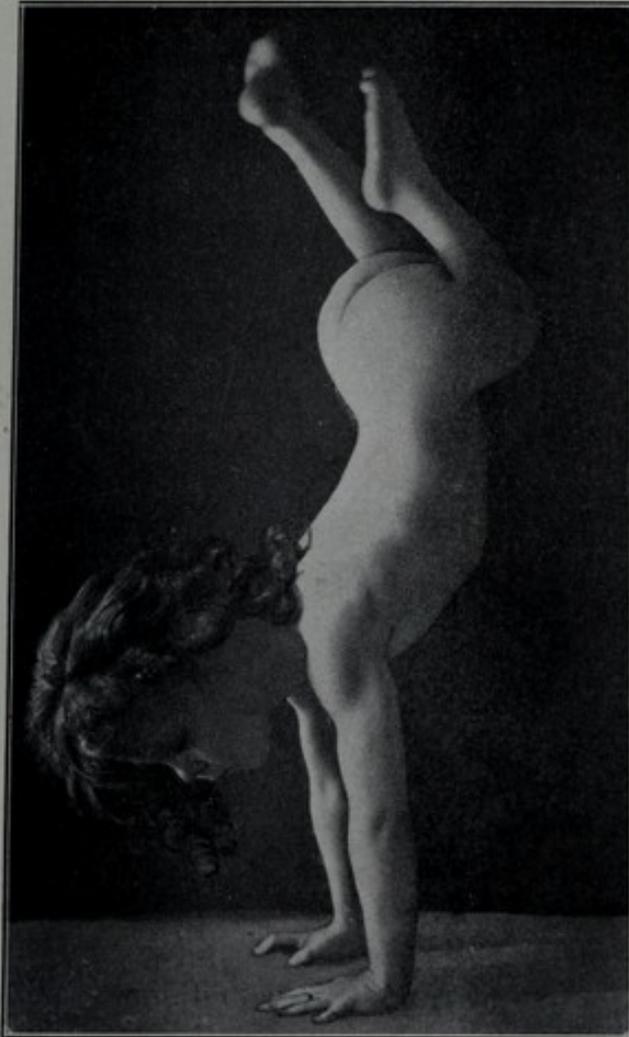


Skilograph of hands and feet. Absent metacarpal, metatarsal, and phalangeal bones. Distortion of left calcaneum and tarsus.

and feet, which shows the fusions and deficiencies in the metacarpus and metatarsus. (Fig. 3.)

Left hand and arm perfect. Right perfect except the hand, from which the first finger was absent ; the middle finger was

FIG. 4.

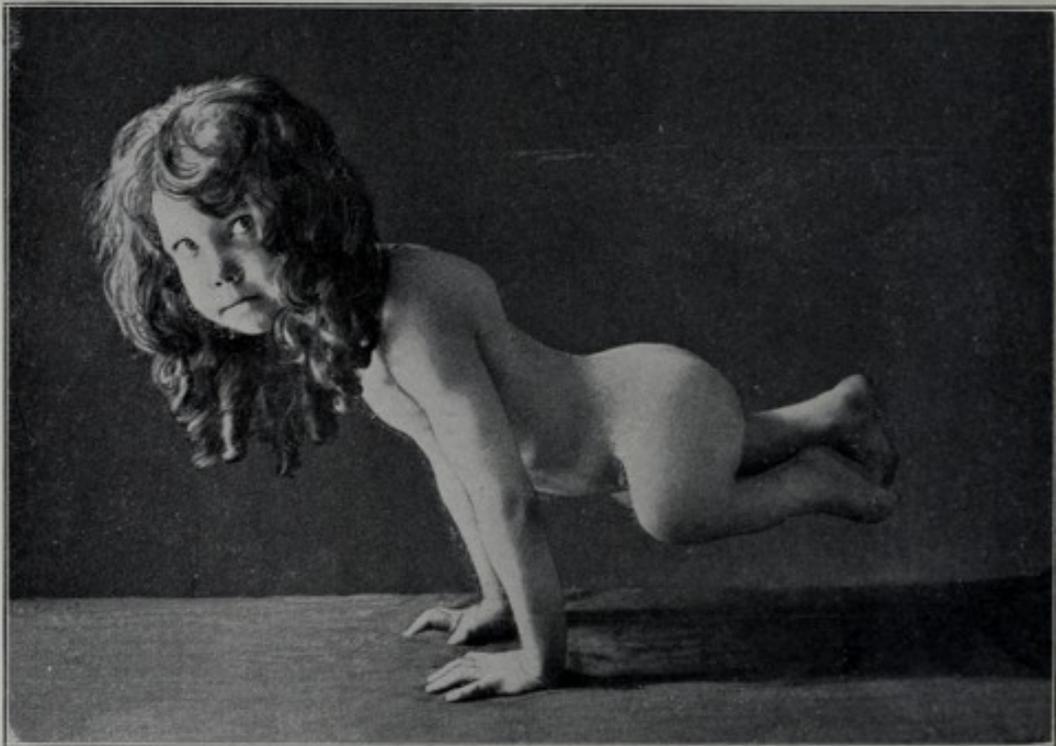


Usual walking position when in haste.

large, probably a fusion of the first and second digits ; ball of hand narrow ; ring finger short and small, extending only to the second joint of the others, one-third the size, and one-half webbed with its neighbor on the outer side.

Locomotion in the upright position was so difficult that he progressed much easier on all-fours, and usually went either on a gallop or trot, his strong arms and body enabling him by this method to move quite rapidly. When he was in haste he either trotted upon all-fours, or, inverting his body, would run upon his hands. (Fig. 4.) His arms were unusually developed, and with his light lower extremities he could walk upon his hands, with his body in

FIG. 5.



Congenital deficiency of legs. Child able to run upon its hands, with body in the horizontal position and with legs elevated from floor.

the horizontal position; could even in this posture lower himself slowly to the ground and raise himself—a feat which would be impossible even to an acrobat. (Fig. 5.)

Of course, operative measures could not increase the length of the femurs, but their flexion upon the pelvis was overcome by open section of the tensor vaginæ femoris and rectus muscles upon either side. An osteotomy through the middle third of the anterior curve of the left tibia was performed, which, together with tenotomy of

the tendo Achillis, hamstrings, and peroneal, brought the left foot and leg into much better position, and resulted, together with the adaptation of apparatus, in bringing his buttocks in standing eleven and three-eighths inches from the floor, which increased his total

FIG. 6.



Congenital deficiency of bones. Result after osteotomies and myotomies.
Body raised nine inches.

height to thirty-five and three-eighths inches—a gain of over nine inches. (Fig. 6.) His left leg was lengthened by the addition of a cork sole to equal its fellow, but the flexion of the thighs could not be entirely overcome.

CONGENITAL DEFICIENCY OF TIBIA.

Fig. 7 is the skiagraph of a child, two years of age, with a deficiency of the entire lower end of the tibia, and with absence, or cartilaginous condition, of the tarsus. The foot is attached to the

FIG. 7.



Congenital deficiency of lower end of tibia and of tarsal bones.

tibia at the middle of the leg. Over the projecting point of the spine of the tibia is tissue which is cicatricial in appearance. The child is otherwise perfectly normal.