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TWO CASES OF CONGENITAL HYPERTROPHY OF THE FINGERS.[1]

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CONGENITAL hypertrophy of the fingers or toes is stated by Bradford and Lovett[2] to be "a condition which is occasionally encountered, but which is decidedly rare. It is, perhaps, noted at birth that one digit is larger than the rest, and with the growth of the hand, this abnormally large finger remains proportionately the same, growing more rapidly than the other fingers. It is a hyperplasia of all the structures, although sometimes more marked in the muscular and areolar tissues than in the others. The arteries going to these fingers are larger and the temperature higher than in the normal fingers."

CASE I.—Gertrude P., aged eighteen months, came under observation February 24, 1893. The family history was excellent excepting that a first cousin, a female on the paternal side, had webbed fingers of one hand.

This child was born with the index and middle fingers of the right hand distinctly larger than those of the opposite hand. During the first year of life these fingers

[1] Read before the Orthopedic Section of the College of Physicians, Philadelphia, January 19, 1894.

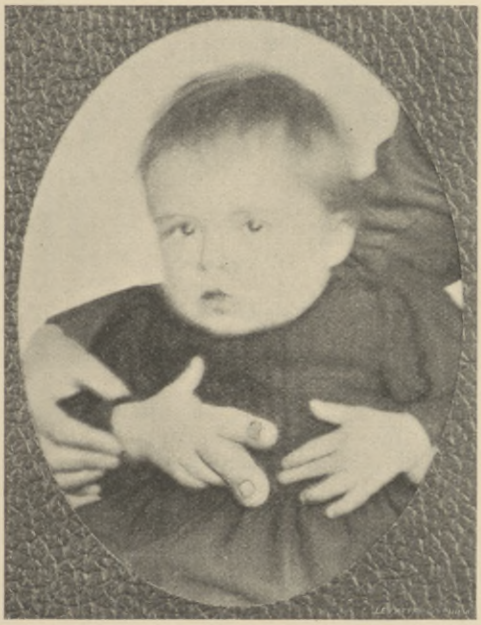
[2] Orthopedic Surgery, p. 532.

did not appear to increase in size much more rapidly in proportion than did their fellows; but during the past six months the rate of growth in the diseased digits has received great impetus. The mother states that the increase during this latter period has been both actually and relatively very great as compared with the preceding six months. An interesting possibility of maternal impression is connected with the history of this case. When two months pregnant of the child under consideration, the mother was sitting in a street-car holding the index and middle fingers of the right hand within the grasp of all the fingers of the left. Some accident happening to the horses, she squeezed the two fingers of the right hand immoderately for some minutes with the left hand. For some time afterward the squeezed fingers were more or less palsied and the seat of much pain. From that time she was fearful that she had in some manner injured the child, and although she had not distinctly announced her belief that the corresponding fingers of the child would be the seat of defect, yet she was certain that some harm had come to the embryo.

Excepting the diseased fingers the child is absolutely healthy and well developed in every respect. The overgrowth begins immediately beneath the metacarpo-phalangeal joints, these being practically normal. The bony phalanges are hypertrophied. The interdigital joints are loose and permit of some lateral motion. Flexion for more than one-half of the normal extent is impossible. The terminal phalanx of each affected finger is especially prone to excessive extension. The articulating surfaces of the inter-phalangeal joints, as well as the ligaments, are evidently defectively evolved. Power of movement in the fingers is limited. Flexion is very weak, but extension is comparatively strong. Voluntary lateral movement of the digits is practically absent.

The tissues present a swollen and edematous appear-

ance of hypertrophy, although no pitting takes place upon pressure being exerted. To the touch these tissues feel similar to the overgrowth of skin and cellular substance produced by long-continued congestion of a part. The skin is thin and mottled red, especially upon the



CASE I.

flexor surfaces. Sensation appears to be normal. A thick web connects the two diseased fingers as far forward as the second inter-phalangeal articulations. The following comparative measurements were taken: Length of right index finger from metacarpo-phalangeal joint

downward, 2¼ inches; of the left, 1½ inches. Right middle finger, 2½ inches; left, 1¾ inches. Circumference at second joint of right index, 2¼ inches; at same point of left index, 1¼ inches; same point on right middle finger, 2½ inches; left, 1¼ inches. The nails of these fingers are enlarged proportionately to the size of the digits, but have a defective, unfinished appearance.

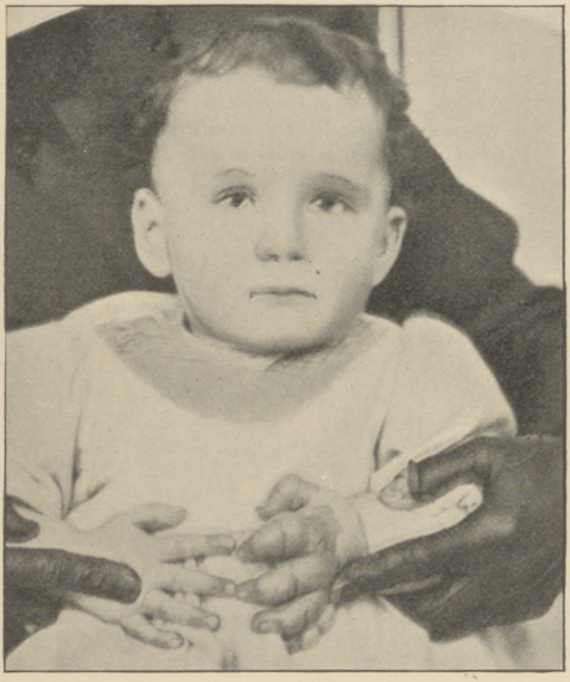
The child had been treated at various times by elastic compression, liniments, sorbefacients, and other measures, without the slightest benefit.

Amputation presenting the only hope of relief, I accordingly removed the fingers at the metacarpo-phalangeal articulation by antero-posterior flaps. A large pad of fibro-fatty tissue was also dissected out from the palm. The parts were exceedingly vascular and a number of catgut ligatures were required. A continuous silk suture, dressing, and splint completed the procedure. Primary union throughout resulted in a very few days. At last accounts the whole remaining portion of the hand was in normal condition.

A dissection of the removed members showed that hypertrophy and degeneration were present in all of the structures of the fingers, and a microscopic examination made by Dr. Charles W. Burr demonstrated that this hypertrophy was due to a tremendous increase of the adipose and connective tissue.

CASE II.—The child, Martha E. S., is twenty-two months of age. There is no history of a maternal impression, and the family history is negative. Several other children are normal. This child was born by breech-presentation and was almost asphyxiated by the cord being wound around the neck. There was a deep and well-defined groove encircling the left forearm below the elbow, which has grown more shallow, but still is quite prominent and well defined. Below this, great lividity of the forearm and hand persisted for some

weeks after birth, but is now confined to the fingers and back of the hand. The arm below the groove was studded with very hard nodules, varying in size from a pea to a small egg. These at first appeared to be attached



CASE II.

to the bones, but at the end of a year had all become freely movable. One large hard nodule was also present above the elbow and attached to the humerus. This has entirely disappeared. The condition of all of the

affected parts has been slowly improving and at the time of my examination only the fingers and metacarpo-phalangeal regions are affected with lividity and hypertrophic nodules. There is also a condition of cavernous angioma affecting the fingers and thumb in spots, while in some places dark blood balloons out the thinned integument. Motion and sensation are perfect throughout. The bones, joints, and muscles are unaffected; the skin, subcutaneous vessels, and adipose connective tissue alone being diseased. The palm also is unaffected.

Under elastic pressure and constant application of 10 per cent. of ichthyol in lanolin, marked improvement has taken place in six months and ultimate disappearance of the hypertrophic nodules appears probable. The cutaneous circulation has also markedly improved and the angiomatous condition is disappearing. The groove upon the forearm is likewise growing smaller.