

FACIAL HEMIATROPHY

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The following case of facial hemiatrophy is believed to be worthy of being recorded because of its beginning at about six years of age rather than to record one more unusual than others which have appeared in the literature. More importance is attached to a case appearing in childhood in view of the opinion held that the disease is very rare in childhood, a statement which must carry with it the presumption that a goodly number of the cases reported are not genuine, or purely facial hemiatrophy.

Dr. M. Allen Starr¹ reports a case occurring in a girl of eight years and comments that the youngest case on record is sixteen years of age. On the other hand, Mendel² reports a case which began at the seventh year, associated, however, with bodily asymmetry; Fisher³ presented a "young girl" who, two years before, began to show a progressive wasting of both sides of the face; Fischer⁴ adds a case, a patient having had scarlet fever at 7, began a year later to show progressive wasting of the right side of the face, preceded by the development of a "brown spot" so frequently described as appearing prior to the atrophy. Klingmann⁵ collected 83 cases of which he states that in 29 the age was under 10 years, while 37 occurred between the ages of 10 and 20. Payne⁶ reported, in 1880, a man of 42 in whom the hemiatrophy began at 8 years, following an attack of measles. This was followed by a swelling on the left side of the face which became discolored yellowish when "this side ceased to grow."

Another case reported by Port⁷ occurred in a girl of 17 and is stated to have begun at the age of 8; here, however, the atrophy is stated to have not been "restricted to the face and head."

The foregoing, which are by no means all, but sufficient for the purpose, and strengthened by the present case, would seem to indicate that the disease occurs not infrequently in childhood.

The frequency with which injury of the affected side of the face is a part of the history led the author to the belief that possibly an injury to the bones of the face—about the sphenomaxillary fossa—might have resulted in the interception of the otic and Meckel's ganglion or other connections of the sympathetic with the trifacial. Unfortunately, fear of the X-ray prevented the taking of both sides of the face for study..

The area of distribution in this case is interesting in that it so completely represents that of the supply more especially of the second and third division of the trifacial and but little of the ophthalmic branch.

The difference in temperature and the flushing of the right side of the face, not being participated in by the left, would seem to speak for the sympathetic involvement.

The clinical notes are as follows: E. O. K., a schoolboy, aged 10, was first seen October 20, 1904. He was born in Sedalia, Missouri. In Colorado 8 months.

Family History.—Mother and father were born in Germany and both are in good health. Grandfather died of consumption at about forty. Two aunts are dead, one in infancy and one of meningitis. He has one brother 12 years of age in good health.

Previous History.—He was the second born and without instruments. He was very healthy as an infant and was well until about two years of age when he had dysentery, followed by malarial fever (?). One morning at about this time he was picked up and was found rigid and held his head back, although by evening he was able to sit up again. About two weeks later he had gained so as to be able to be about. It was noticed that he limped with his right foot. He was not at any time unable to move the limb. His arm was not apparently affected. It was noticed that the right foot and leg were colder than the left. The left leg was at no time affected. He had measles and whooping-cough.

In the autumn of 1898, while playing on the sidewalk, he fell, striking the left side of his face on the corner of a brick. He was not unconscious. The skin was broken and it took some time to heal (two months). It left a blue scar or spot on the lower external margin of the orbit. About six months later, with the disappearance of the discoloration, there was noticed an apparent cut in the chin, with a diminution of the eminence so formed on the left side. Then it was noticed that the jaw bone was more prominent and it extended over the entire left side of the face. The patient did not at any time complain of sensory disturbance. Occasionally he had headache, although not particularly on the affected side. Dizziness was frequent

while at school. The patient has never been unconscious since this affliction began. He has no bowel difficulty and no noticeable difficulty in urinating (*i. e.*, he occasionally passes large quantities of urine). No vomiting. He sleeps fairly well. His appetite is variable.

Examination, October 25, 1904.—He is a boy 4 feet 8½ inches in height and of fair complexion and light hair. He moves about on crutches on account of “white swelling” of the left knee. His right leg bears evidence of an anterior poliomyelitis in that it is wasted but motion is quite well recovered. His face



Showing the wasting of the left half of the tongue.

presents a very marked atrophy of the left side, not confined to the fleshy portions but also of the bony prominences. The mouth rests at an angle of about 160°, apparently drawn up and to the left. The lower half of the lip is apparently most wasted as are the mental tissues. The nose is seemingly drawn to the left side probably from wasting of the cartilages of this side. There is seemingly atrophy of the frontal bone causing the eye to appear sunken. At the lower external angle of the lower lid is a scar one-half inch in diameter, the site of the injury due to the fall. The skin is dryer to the touch and somewhat cooler on the left, notably paler on several observations, and the mother's observations confirm this condition. The teeth participate in the deficiency of development as is shown in the cast of the mouth. Those of the left upper jaw are smaller especially

the left lateral incisor, while in the lower jaw the lateral incisor of the left side is entirely crowded forward and the alveolar process slightly shorter.

Measurements.—From the inter-frontal suture to the external angular process, R. $2\frac{1}{4}$ inches, L. 2 inches. Coronal hemi-circumference, R. $10\frac{1}{4}$ inches, L. $9\frac{3}{4}$ inches. Bi-parietal hemi-circumference (from external auditory canal to interparietal suture), R. $7\frac{1}{4}$ inches, L. $6\frac{1}{4}$ inches. From the subnasal point to the angle of the lower jaw, R. $4\frac{5}{8}$ inches, L. $3\frac{1}{2}$ inches. From symphysis menti to the same angle, R. $3\frac{3}{4}$ inches, L. 3 inches. The palpebral opening of the right eye is one eighth inch greater in diameter than the left (*i. e.*, from the external



Showing the atrophy of the left side of the face.

to the internal canthus). The tongue is protruded markedly to the left side and from the median furrow which is quite marked, the left half is one third the width of the right side. Dynamometer, R. 85, L. 85. He is right handed.

He walks with crutches on account of the knee and therefore his gait cannot be ascertained although his mother states that in walking he did limp prior to the putting on of the cast. It is not so noticeable in running. There is a difference in the size of the leg (below the knee), the right being perceptibly smaller. The strength in the flexors of the right foot is not so affected as the extensors.

Electrical Reactions.—Galvanic (chloride of silver battery,

twenty cells in circuit). Orbicularis palpebrarum, slight CCIC at 2.5 m.a. on the R.L. same. Levator anguli oris, no CCIC on the left at 3 m.a. Masseter and depressor menti, same.

The galvanic reactions on the two sides of the face show an equal irritability, and rather depressed than increased. More than 3 m.a. cannot be used on the face on account of the unwillingness to bear the burning sensation of the skin. Faradic irritability is normal.

Reflexes.—Knee Jerk, R. absent, L. cannot be taken. Ankle clonus absent. Tendo Achillis, R. absent. Deep Reflexes of the Forearm, R. present, L. same and about equal, as are also the biceps, triceps and deltoids. Masseter, R. absent, L. absent. Superficial Reflexes: Plantar, R. present, L. same and equal. There is no Babinski phenomenon. Cremasteric, R. present, L. same and very marked on the left side, the testis being drawn into the inguinal canal on stroking the thigh. Lower abdominal, R. present, L. same and equal. Epigastric, present. Pharyngeal, R. present, L. present. Cervico-pupillary reflex, R. present, L. present. Sensory phenomena: Tactile sensibility is present throughout. Pain and temperature are accurately recognized and localized and not the slightest delay or hesitation is to be observed on the affected side of the face. The pressure sense is equally acute as are the joint and postural senses. The tongue and mucous membrane of the mouth are also perfect in this respect.

Taste is present on the affected side of the tongue and as rapidly recognized as on the unaffected side and apparently more so. Substances are named accurately. Smell is present and about equal and he recognizes and names odors used.

Hearing.—(Watch = 24") R. 30/24, L. 30/24. Tuning fork is heard best in the closed ear. Aerial conduction is greater than bone.

Eyes.—All external ocular muscles are normal. Pupils are equal in size and about 3.5 mm. and react to light and accommodation. Vision R. 20/15, L. 20/15. The fundi are clear and discs are well outlined. Pigment, moderate. The left choroid is seemingly more congested than the right.

The question as to whether these cases are properly called atrophy or inhibited growth has been raised, and in the foregoing case there would seem to be partly atrophy and partly checked development. The illustration of a copied photograph of the patient and brother taken together prior to the wasting would seem to justify the opinion that true atrophy had taken place, as well as the lack of growth which is otherwise evident. In this picture the position of the right foot shows also the poliomyelitis.

It is the belief of the writer that this is one of the true types of facial hemiatrophy and as such would not seem to warrant

resection of the trifacial, as has been suggested by Dercum,⁷ as a means of treatment inasmuch as no function of this nerve is evidently disturbed.

When last observed, within the last year, the patient had developed normally, other than in the left side of the face. He walks well, all evidence of the white swelling having disappeared under appropriate treatment, and the slight disproportion from the infantile paralysis being slightly evident.

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