A CASE OF ACROMEGALY.

By JOHN BARCLAY, M.D..

President of the Aberdeen, Banff, and Kincardineshire Branch of the British Medical Association,

AND

WM. ST. CLAIR SYMMERS, M.B. ABERD.

THE patient, H.W., a man, aged 40, resides in the village of Whitehills, Banffshire, where he has passed the greater part of his life, never having been abroad or subjected to any climatic influences foreign to the coast of the Moray Firth. He was a farm labourer by occupation, but has for many years been unable to do any work owing to the physical condition which his disease has imposed upon him. There is nothing of any special medical interest in the history of his family, his father is still living, aged 74, his mother met her death by accident, his five brothers and four sisters are all in excellent health and present no abnormalities. So far as can be ascertained his more remote relatives are devoid of any special pathological interest.

HISTORY OF ILLNESS.

The disease began when he was in his 25th year. His hands and feet slowly grew larger, and the face and body underwent the process of enlargement typical of this malady. At the commencement of his trouble he suffered from severe headaches. These continued for some four or five years, but gradually became less intense and less frequent. He was also subject to violent and frequent attacks of epistaxis. There were likewise joint pains of moderate severity, which he attributed to cold and the hard labour to which he was subjected. The patient believes a fall from a horse to have been the starting-point of the disease, and in fact there is a depression on his skull at the upper border of the occipital bone, which depression is nearly 2 inches in diameter, and which he states to have been the result of this fall.

PRESENT CONDITION.

The patient is a man of great size—6 feet 2 inches in height, and weighs 20 stone. His hands are enormously enlarged, the hypertrophy affecting both the bones and the soft parts. The increase in size is chiefly lateral, although the length of the hand is also increased. On palpating the fingers the increase of the bone in a lateral direction is very striking, it being at once evident that the thickness of the phalangeal bones, from dorsal to palmar surface, is not relatively so much increased as it is from side to side. The fingers are sausage-shaped, and bear nails apparently too small for them

(Fig. 1). The nails are marked by prominent longitudinal striation, have incurved edges, and are about twice as broad as long. There is a huge hypothenar mass of flesh, which is easily movable above the subjacent bones. The lines in the palm of the hand and about the joints of the fingers are deeply marked. The wrist likewise participates in the enlargement, the inferior ends of the ulna and radius being greatly hypertrophied, the styloid process of the ulna is particularly huge and prominent, while the pisiform bone projects like a large marble under the skin. In addition, the hand is thickly freckled on its dorsum by pigment spots of a bistre-brown colour. This pigmentation extends up the forearm, particularly on its extensor aspect.

The bones of the arm and forearm are also considerably hypertrophied, but not relatively to the same extent as those of the hand, so that the huge spade-like hand appears almost too heavy for the arm to support.

The condition of the feet and legs is exactly analogous to that of the hands and forearms, only the hypertrophy is not so great. There is the increase in breadth and length of the bones and soft parts, the pad of flesh on the outer side of the foot, the enlarged malleoli, the pigmentation, the peculiar shape and deepened striation of the nails—in short, all the various features of the acromegalic hand are reproduced in the feet. The tendo Achillis is large and rope-like, and is fastened to an enormous os calcis. The head of the fibula, the upper extremity of the tibia, the patella, and the condyles of the femur are all greatly hypertrophied.

The forehead is low, broad, and receding, and the skin, particularly when the eyebrows are raised by muscular contraction, is thrown into folds with deeply-grooved furrows. The supraorbital ridges are exceedingly prominent, mostly so in the glabellar region. The nose is well-formed and regular in its outline, but is much hypertrophied in both the bony and soft

parts. The upper lip is thickened considerably, but not nearly so much so as in the lower lip, which is very much enlarged and somewhat everted. The lower jaw is greatly increased in size, so that the face is markedly prognathous (Fig. 3), the lower incisors being $\frac{1}{2}$ -inch in advance of the upper incisors when the mouth is closed. The hypertrophied lower lip adds to the prognathous appearance, which is especially noticeable when the patient shuts his mouth. The patient usually goes with his mouth half open. The teeth are well formed and complete; they are not apparently enlarged, but in the lower jaw they tend to be separated from one another owing to the hyperostosis of the inferior maxilla. The zygomata and malar bones are promi-

Fig. 1.—Shows patient's hand along with that of Dr. Symmers, and various characteristics referred to in the paper.

ment,¹ the prominence of the latter being apparently due to dilatation of the antrum of Highmore, as described by Broca in his report on the skeleton of one of Marie's original cases. The face has the appearance of being flattened laterally. The eyelids are not affected to any marked degree, while the ears are considerably enlarged, the left somewhat more than the right. The cranial bones are not affected to anything like the extent of the facial bones, the various alterations of the latter giving the face the peculiarly vertically-elongated oval appearance described by M. Marie.² The face and neck are thickly covered over by the same kind of brownish pigment spots that were observed on the hands and feet. The scalp over the entire head is greatly thickened, and is easily movable, as there are no localised adhesions to the deeper parts, but it is not easily thrown into folds, in this particular contrasting with the scalp described by Mr. Hutchinson,³ who speaks of the hypertrophied scalp in one of his cases of acromegaly as being very easily thrown into folds. The beard is scanty, but on the head the hair is thick, coarse, and abundant; indeed, the individual hairs would seem to have fully held their own in the hypertrophic race. The tongue is enormously enlarged in all its dimensions, and is seemingly too big for the mouth, and doubtless accounts partly for the slow and clumsy articulation which the patient manifests.

In this connection we may refer to a case published by Mr. Chalk in the *Transactions of the Pathological Society of London* for 1857, and which appears to have been a typical case of acromegaly, but which the reporter describes as one of partial dislocation of the lower jaw from an enormously hypertrophied tongue.⁴ The neck is short and thick, and so set upon the trunk that the head as a whole is projected forward on the breast (Fig. 3). The thorax and vertebral column participate in the hypertrophy. There is a well-marked cervico-dorsal kyphosis (Fig. 3), with compensatory dorso-lumbar lordosis.

Otherwise the spine is straight, there being no scoliosis. The clavicles are enormous, as are also the ribs, whose natural obliquity is much increased, and the lower ribs seem as if strongly forced outwards. The sternum is greatly hypertrophied, and projects markedly forward at its lower end, where it terminates in an ensiform cartilage of great size. This condition of the sternum, ribs, and spine produces a great enlargement of the thoracic cavity, the circumference of the chest at the level of the nipple being 49 inches. The respiratory move-

ments of the thorax are peculiar; the heavy chest wall seems to be raised imperfectly under the action of the inspiratory forces, thus necessitating breathing which is chiefly diaphragmatic.

The pelvis appears to be much more massive and heavy than normal, the crests of the ilia being distinctly enlarged. All the joints of the body are more or less enlarged, and a peculiarly dry crackling is occasionally elicited on their movement. The thyroid gland cannot be felt, neither is it possible to determine any retro-sternal dullness, such as according to Erb⁵ would indicate the persistence of the thymus. The patient has a strong, deep voice, and, as remarked above, articulates with some difficulty. The penis is rather large, and it would seem as if the sexual appetite were greatly in

abeyance. Sight and hearing are both fair, but he thinks both these senses show some symptoms of failing. The pupils react both by light and accommodation. We may remark here that this diminution in the power of sight is, by some observers, looked upon as a diagnostic symptom of the great and progressive enlargement of the pituitary body which presses upon the optic nerves; but, as Broca⁶ has pointed out, pressure on these nerves may also be caused by narrowing of the optic foramina consequent on the abnormal growth of the lesser wing of the sphenoid. Moreover, it may be well to bear in mind the frequency with which optic neuritis occurs in locomotor ataxy. The skin of the patient's hands, feet, face, and neck, except where pigmented, is more than usually white, anæmia is general. Cutaneous sensibility is in no way impaired, so far as could be determined.

The knee-jerks are obtainable with some difficulty.⁷ His muscular power for isolated efforts is great, but nevertheless he soon becomes fatigued by sustained exertion. A moderate amount of walking, any considerable or even inconsiderable exertion, such as bending to tie his shoestrings, sometimes causes profuse perspirations to

Fig. 2.—Gives an excellent idea of the general contour compared with that of Dr. Synmers.

break out over his face.

There are no molluscoid growths to be seen on the body, and no varicose veins, both of which appear to be common in such cases. His appetite is enormous (there is no diabetes), and he can drink immoderately of whisky without becoming at all intoxicated. His bowels are habitually constipated. His urine, which is secreted in large quantities, contains no albumen, sugar, or peptones.

The patient's mental condition is good; he is an excellent draught player, can perform on the concertina with consider-

¹ Broca, *Archives Générales de Médecine*, December, 1888.

² Marie, *Revue de Médecine*, April, 1888.

³ Hutchinson, *Archives of Surgery*, October, 1889.

⁴ Marie, *Brain*, vol. xli, 1890.

⁵ Erb, *Deutsche Archiv f. Klin. Med.*, xlii, 1888.

⁶ Broca, *loc. cit.*

⁷ Verstraeten, *Revue de Médecine*, May and June, 1889.

able skill, and enjoys the reputation of being able to drive a shrewd bargain.

An almost continuous tinnitus aurium troubles him, but it is not sufficiently intense to cause any very great annoyance. At the present time he does not suffer from headache. The

Fig. 3.—Side view of face and neck, showing general enlargement of features and cervico-dorsal kyphosis.

first sound of the heart is weak, and he has had two or three epileptiform syncopal attacks, but there is no irregularity of the pulse and no dropsy of the limbs.

MEASUREMENTS OF THE PATIENT.*

	Inches.
Length of hand from lower fold of wrist to end of middle finger ...	8½
Length of middle finger from palmar fold at its base ...	3½
Dorsal length of middle finger from base of first phalanx ...	5
Palmar length of little finger ...	2½
Circumference of hand (without thumb) at head of metacarpal bones ...	11½
Greatest circumference of "obstetric hand" ...	13½
Greatest thickness of hand (callipers) at level of thenar eminence ...	2½
Circumference of middle finger ...	4
Circumference of thumb ...	4½
Circumference of little finger ...	3½
Circumference of wrist immediately below extremities of ulna and radius ...	9½
Circumference of wrist at level of styloid process ...	10½
Circumference of forearm at the middle ...	10
Circumference of arm at the middle ...	13
Length of nail of middle finger ...	1
Length of nail of thumb ...	1
Breadth of nail of middle finger ...	1
Breadth of nail of thumb ...	1
Length from iliac crest to summit of head of fibula ...	23
Length from summit of head of fibula to tip of external malleolus ...	11½
Vertical diameter of patella ...	2½
Transverse diameter of patella ...	3
Circumference of thigh at middle ...	19
Greatest circumference of calf ...	16
Circumference immediately above tip of internal malleolus ...	10½
Greatest length of foot ...	13
Circumference over heel and instep ...	16
Greatest circumference of foot ...	12½
Greatest width of foot ...	4½
Circumference of great toe ...	5½
Circumference of little toe ...	3
Length of nail of great toe ...	½
Width of nail of great toe ...	1
Length from top of forehead to tip of chin ...	10½
Length from top of forehead to upper part of nasal bones ...	2½
Length from upper part of nasal bones to tip of nose ...	3½
Greatest width of alae nasi ...	1½

* *Marie in Brain*, vol. xii, 1890, for measurements required.

	Inches.
Distance from tip of nose to point of junction of the latter with upper lip ...	1½
Length from septum of nose to point of chin ...	3½
Greatest distance between outer surface of cheek bones ...	5
Width of mouth ...	2½
Vertical measurement of lower lip ...	½
Transverse measurement of tongue at middle ...	3
Thickness of tongue at middle ...	½
Distance (with callipers) from temporo-malar articulation to lower part of symphysis of chin ...	7
Distance (with callipers) between angles of lower jaw ...	5½
Ditto, with tape measure along the body of the bone, passing in front of the symphysis ...	12
Ears, greatest length, right ...	3
Ears, greatest length, left ...	3½
Ears, greatest breadth ...	1½
Circumference of thorax over nipple ...	49
Circumference of neck between the hyoid bone and upper part of thyroid cartilage ...	18

This case is believed by the authors to be the first reported in Scotland.

The figures are from photographs taken by Messrs. A. Rae and Son, Banff.

THE PATHOLOGY AND TREATMENT

OF

SUPPURATIVE DISEASES OF THE EAR.

Being an abstract of the Harveian Lectures delivered before the Harveian Society of London.

[WITH A COLOURED LITHOGRAPHIC ILLUSTRATION.]

By G. P. FIELD, M.R.C.S.,

Aural Surgeon to St. Mary's Hospital and Dean of the Medical School.

LECTURE I.—ANTISEPTIC IN AURAL SURGERY.

As regards the pathology of suppurative otitis media I wish, as briefly as possible, in view of the shortness of the time at our disposal, to lay before you some of the more recent results arrived at by observers, both British and foreign. There are few busy practitioners, who have watched the rapid progress of pathological knowledge during the past fifteen years, without experiencing an impatience amounting sometimes almost to exasperation when, face to face with some obstinate complaint, they find themselves unable to perceive that all this new science gives them a titlle of substantial aid. If one, however, compares the results of treatment some twenty or thirty years ago with those of the present day, it is impossible not to admit that times have changed for the better, and that, in fact, splendid practical advance has been made in the treatment of aural disease. Although it may be true that the majority of cases are managed much as they were in years gone by, there is yet this difference in our treatment, that it is based no longer on empiricism, however practical, but upon definite and well-recognised principles: we can justify our methods by reasons as well as by results. In olden days conclusions as to the character of disease, the probable efficacy of medicine, and of modes of treatment were deduced, not so much from observed facts, as from fancied analogies among things natural, and the healing art, as a whole, was held to be dominated by the influence of the stars and powers unseen and supernatural. Later the teachings of experience were clouded by false theories of the construction of the frame corporeal. In these last times—we may say since when John Hunter taught how death itself, when it comes, is no new thing to man, but only the final stage in the processes of life—a new pathology has arisen: Nature has been interrogated, and we have learned from her that though disease may have its phases according to the forces brought to bear upon it, still those forces are of natural origin, and can be antagonised alone by natural methods. We now know our enemy and the manner of his attack, and when deadly complications arise we have greater resolution and resource in combating them than heretofore.

From the observations of many writers we have arrived at this broad result—that, as expressed in Hüter's dictum, supuration, that is, natural suppurative, is a specific disease endemic in the whole world; or, defining it yet more closely, we may state it to be a group of closely allied but distinct specific diseases caused by different and well characterised organisms. It is to the genius of Lister that we owe the recognition of the laws to be laid down for its prevention.