consists in opening the cavity for proper drainage, thorough irrigation, and disinfection. Any other plan involves a long and tedious course of treatment, with exceedingly doubtful results.

My method of exploratory puncture, which serves for diagnostic as well as therapeutic purposes, is that of perforating the alveolar apophysis. The mucous membrane having been cocainized by the local application or submucous injection of a ten per cent. solution of cocaine muriate, a circular piece of mucous membrane is cut out with a tubular knife, below the gingivo-labial fold, between the roots of the second bicuspid and first molar. A drill worked by an electric motor is directed upward, inward and backward at an angle of about forty-five degrees with the plane of the alveolus, the drill entering the sinus at its most dependent part. The opening thus made can be enlarged by a burr of a sufficient diameter to admit of thorough irrigation and disinfection. A gold drainage tube must be so fitted that the distal end will enter just within the sinus, while to the proximal end is properly fitted a collar or clasp, by which it is made fast to a tooth, thus holding it securely in place.

The after treatment consists in daily irrigation of the cavity with an antiseptic solution (preferably a saturated solution of boric acid), and followed by the insufflation of iodoform, iodol, aristol, or europhen.

In cases where suppuration persists beyond a reasonable time, I enlarge the opening by a trephine or tubular knife, and explore the cavity with a probe. If there is much thickening of the mucosa, or the exploration discloses caseous pus, I curette thoroughly, following it by irrigation, and packing with iodoform gauze for twenty-four hours, which is then removed, and, after irrigation, one of the above powders (preferably the europhen and iodol mixed) is insufflated, and repeated every second day. I am quite favourably impressed with the method of Robertson, of perforating the anterior wall of the maxillary sinus in the canine fossa, of sufficient size to make a digital exploration, and to use an electric light searcher.

Since it seems desirable, in those chronic cases of persistent suppuration, to thoroughly explore the maxillary sinus, the above radical measure will meet the approval of many, because we are thereby enabled to submit the entire field of operation to a searching examination and effective surgical treatment.

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ANNOTATION.

ACROMEGALY.

As the name proposed by Pierre Marie, who only so recently as 1886 first clearly isolated the disease, indicates—(ἀκρα, end ; μεγαλη, big)—acromegaly is characterized by enormous increase in size of the extremities of the body. The hands and feet undergo a remarkable hypertrophy, which, in the majority of cases, is also well marked in the case of the

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nose and ears. Another prominent feature is a marked increase in size of the fibro-cartilages of the eyelids, nose, ear, larynx, and epiglottis. To the increase in size of the bones of the face, more especially of the superior and inferior maxillæ, is due the elongated ellipse the features assume in fully-developed instances. The air sinuses of these bones are always more or less enlarged, and contribute towards giving a broader appearance to the face than normal. The hypertrophy in some regions, *e.g.*, the hands and feet, is not alone confined to the skeletal parts, but is demonstrated in all the tissues of the part, both soft and osseous.

The most consistent accompaniment of these external manifestations, whether of a pathological nature has yet to be determined, is a marked enlargement of the pituitary body associated with a corresponding depression or excavation in the sella turcica.

Such is true for the greater number of cases of the disease where *post-mortem* investigation has been attainable. It may be interesting to note that in a case of well-established acromegaly recently under the care of Dr. Craggs, of the Newcastle-on-Tyne workhouse, the *post-mortem* examination revealed a tumour of the pituitary as large as a green walnut.

It cannot be admitted, however, that up to the present this association of enlarged pituitary and acromegaly aids much in the elucidation of the strange condition, for, as recent literature shows, enlarged pituitary has been observed besides in mxyœdema (Noyes and Beadles), cretinism, and cachexia thyreopriva. Enlarged pituitaries, again, have been observed without any of the appearances of acromegaly.

The division of the pituitary gland invariably found to be affected is the anterior or glandular portion (in structure and function similar to that of the thyroid), which is developed from the buccal cavity, and it is interesting in this connection to observe that in acromegaly the posterior parts of the mouth, the tonsils, palate, uvula, pillars of the fauces, and oro-pharyngeal mucosa are enlarged, the latter being in some cases thrown up in folds. It ought to be remarked that the several lesions of the pituitary resemble closely those observed in the thyroid. Briefly the microscope shows the gland acini of the hypertrophied pituitary dilated, and the colloid matter increased inside as well as outside the acini. The condition of the thyroid is for the most part that of atrophy as in myxœdema. Apart from the condition of the pituitary and thyroid, the pathological anatomy of acromegaly consists in hypertrophy of all the structures of the part. The sheaths of the peripheral nerves are affected, and in the bones a new formation of osseous tissue takes place. The hypertrophy of the tongue is due to an increase of the connective tissue and individual muscle bundles. The sympathetic ganglia in the neck are degenerated, in the atrophied thyroid cystic and enlarged follicles are observed, while the nasal mucosa is infiltrated. Another feature in acromegaly dwelt upon by certain authors, but less accentuated by many, is an enlargement of the thymus evidenced clinically by a triangular dulness at the upper part of the sternum.

Frequently the appetite for food and drink is large, while the quantity of urine passed is increased. Polyuria and diabetes are frequently observed phenomena in subjects of the disease. Profuse sweating and

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headache are frequent symptoms. Age and sex betray little effect on its incidence, while it would seem to affect blacks as well as Europeans. Premature cessation of the menses is often associated with its commencement in women, while in males injuries, accidents, alcoholism, etc., are often precursors of its development, which is often rapid, and at first referred to swellings of the hands and feet, which are sore and sensitive to the touch.

The skeletal changes present in acromegaly are summarized as follows by Thomson ("Journ. Ata. and Phys.")

1. Changes peculiar to acromegaly, an enlargement of the pituitary fossa and disproportionate development of the bones of the face, dilatation of air sinuses, hypertrophy of cranium clavicles, and enlargement of temporo-maxillary articulation.

2. Changes resulting from a tendency to the formation of new bone, both in normal and abnormal sites, thus approaching in character osteo-arthritis. Thus tendons, ligaments, costal and other cartilages become ossified.

Inter alia, the external orifice of the external auditory meatus has been found considerably enlarged, rendering the canal funnel-shaped or conical with the apex at the membrana tympani.

From even a cursory review and consideration of all that has been said and written about this most anomalous vagary of nutrition, it is only too evident that but half the picture of the disease is yet visible. It naturally follows from the fact of the increasing number of necropsies showing enlarged pituitary bodies that some connection of the nature of cause and effect should be thought of. To this opinion Dr. Marie inclines, and points out that there is a tendency to abnormal development in the osseous system analogous to primary progressive myopathy. In the alterations in the hypophysis and thyroid, and perhaps also in the persistence and hyperplasia of the thymus, may yet be found the mystery of its causation.

The "internal secretions" of these organs (blood glands) exercise an important function in the economy. Abolish the function of the thyroid, and myxœdema results. In the case of the pancreas, if this is destroyed pancreatic diabetes supervenes: while if the supra-renals are destroyed a motor paralysis sets in of a nature similar to that affected by curarl. The presence of enlarged hypophysis in myxœdema, where the osseous system is never affected, somewhat affects detrimentally the theory that would attribute the causation of acromegaly to some chemical substance acting on the tissues as an irritant, its presence being accounted for by the deficiency or entire absence of the internal secretion of one or other of the blood glands mentioned (hypophysis, thyroid, thymus). Whatever the cause, undue stimulation of nutrition is effected, the excess of this particular function being observed almost in every tissue, in the connective more especially, as witnessed in the osseous system.

Detailed descriptions of the symptoms of acromegaly, as displayed in its early stages, are wanting. Just as the symptoms impress the patient he may consult the aurist or the laryngologist, and so on. A reference therefore to the subject in these columns may serve to awaken interest in the matter.

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