2. Insomnia and Hypnotics.

Lemoine. Gaz. méd. de Paris, 1887, 18. (Methylal.)
Personali. L'Union méd., 1887, 9. (Methylal.)
Illingworth. Insomnia. Med. Press and Circ., August 29, 1888.
Reichmann. Chloralamid, ein neues Schlafmittel. Deutsche med. Wochenschr., 1889, 31.
Jastrowitz. Schlaflosigkeit. Ibid., 1889, 31.
Mauthner. Schlafkrankheiten. Allg. Zeitschr. f. Psychiatr., 1891, xlvii, 6.
Brie. Trional als Schlafmittel. Neurol. Centralbl., 1892, xi, 24.
Filehne. Ueber das Hypnal-Höchst. Berliner klin. Wochenschr., 1893, xxx, 5.
Koppers. Wirkung des Trionals. Inaug.-Dissert., Würzburg, 1893.

C. AFFECTIONS IN WHICH THE TROPHIC NERVES ARE CHIEFLY IMPLICATED.

Our acquaintance with the few affections to be described under this head is of very recent date. Since their pathogenesis and their seat are as yet obscure, and since we have to confine ourselves to the description of the most striking symptoms, it is impossible to say whether the place here assigned to them is correct or not.

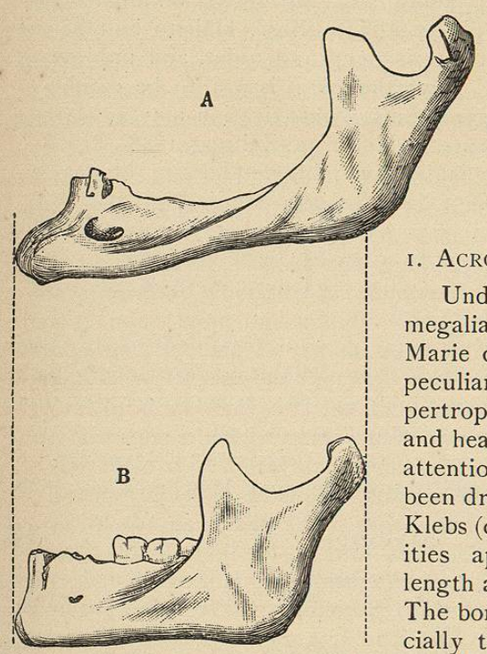

Fig. 154.—*A*, the lower jaw of a patient under the care of Professor Marie, in Paris. *B*, a lower jaw which normally would correspond to the size of the patient.

1. Acromegaly (*P. Marie*).

Under the name of acromegalia (ἄκρον, extremity) Marie described, in 1886, a peculiar non-congenital hypertrophy of the hands, feet, and head, to which affection attention had previously been drawn by Fritsche and Klebs (cf. lit.). The extremities appear increased in length as well as in breadth. The bones of the face, especially those of the cheeks and the lower jaw, present considerable enlargement (cf. Fig. 154), and the measurements of the skull are above normal. In the same way the lips, ears, nose, and tongue are found enlarged, whereas all the muscles are feeble. The skin appears yellowish and pale, but is otherwise normal. The thyroid gland was almost always very atrophic in the cases observed up to the present time.

Fig. 155.—Case of Acromegaly. (After P. Marie.)

In spite of their gigantic appearance the patients are feeble and without strength. The sexual functions are lost early and completely (Freund, cf. lit.).

The onset of the disease dates back to early childhood, and it has to be regarded as an abnormity in development (Freund) "which, probably beginning as early as the cutting of the second teeth, certainly sets in energetically at the period of puberty, and consists in a rapidly developing enlargement of the facial part of the skull, which by far exceeds the physiological limits of growth. This increase is especially marked in the lower jaw and also in the extremities, with their girdle attachments, while the rest of the skull and the trunk are only secondarily altered." The observation of Gerhardt, whose patient was perfectly well up to his sixtieth year, does not agree with this view (Berliner klin. Wochenschr., 1890, 52).

A relatively large number of cases have come to autopsy

since Marie's publication, and from the number of instances reported the disease would seem to be by no means rare. The results of these autopsies have not been very satisfactory, for besides a more or less pronounced increase in the volume of the hypophysis (Boltz, Gauthier, Holsti), nothing worthy of

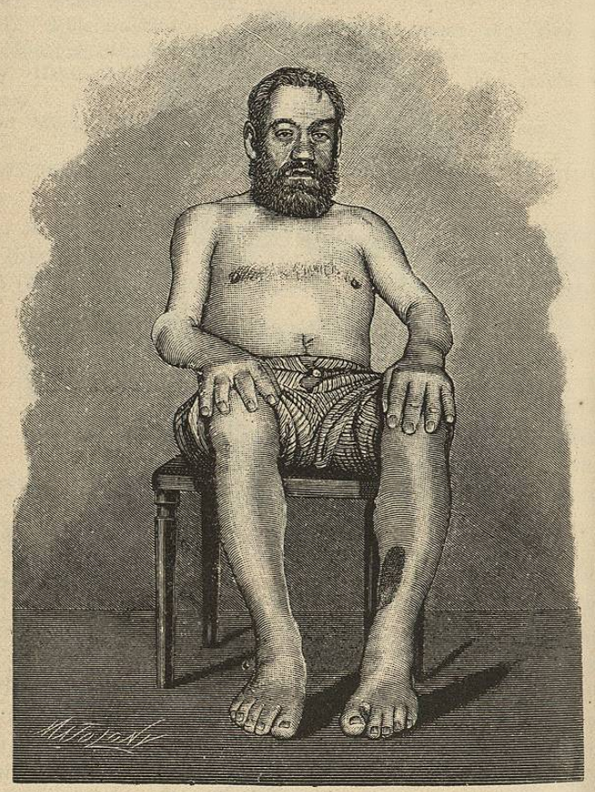

Fig. 156.—ACROMEGALY. (After BUCHWALD.)

note has been found; and since we know nothing of the function of the hypophysis, this finding has thus far proved of little value for the understanding of the pathogenesis of the disease. Nor is our information any more satisfactory so far as cause and treatment are concerned.

According to Goldscheider, who established the fact that the giant growth is not confined to the distribution of any

special nerve, being found, for instance, in the hand, in that of the musculo-spiral and the median, more rarely in that of the ulnar, the ætiological influence of the trophic fibres is still a matter of doubt. Pel (Berliner klin. Wochenschr., 1891, 3) observed a case in which psychical traumatism during menstruation was followed by acromegaly.

LITERATURE.

Fritsche und Klebs. Beitrag zur Pathologie des Riesenwuchses. Leipzig, 1884.

Marie. Sur deux cas d'Akromégalie. Revue de méd., 1886, iv, 4, p. 297.

Fräntzel, O. Deutsche med. Wochenschr., 1888, 32.

The same. Deutsche Med.-Ztg., 1888, 48, p. 581.

Erb. Deutsches Arch. f. klin. Med., Februar 4, 1888, xvii.

Broca. Un squelette d'Akromégalie. Arch. gén. de méd., December, 1888.

Adler. Boston Med. and Surg. Journ., November 21, 1888, cxix.

Freund, V. A. Ueber Akromegalie. Volkmann'sche Sammlung klin. Vorträge, 1889, 329, 330 (11. Ser., Heft 29, 30).

Virchow. Ein Fall und ein Skelett von Akromegalie. Berliner klin. Wochenschr., 1889, 5.

Goldscheider. Arch. f. Anat. u. Physiol., Physiol. Abtheilung, 1889, 1, 2.

Saundby. Acromegaly. Brit. Med. Journ., January 5, 1889.

Marie, P. L'Akromégalie. Étude clinique. Paris, 1889.

Holschewnikoff. Ein Fall von Syringomyelie und eigenthümlicher Degeneration der peripheren Nerven, verbunden mit trophischen Störungen. (Akromegaly.) Virchow's Archiv, 1890, cxix, Heft 1, p. 10.

Recklinghausen, v. Ueber die Akromegalie. Nachschrift zur vorstehenden Abhandlung. Ibid., 1890, p. 36.

Tanzi. Rivista clinica, 1891, Heft 5.

Litthauer. Deutsche med. Wochenschr., 1891, 47.

Duchesneau. Contribution à l'étude anatomique et clinique de l'Akromégalie. Paris, Baillière, 1892.

Murray, G. Acromegaly. Brit. Med. Journ., February 27, 1892.

Arnold. Akromegalie, Pachyakrie oder Ostitis? Ziegler's Beitr. z. pathol. Anat., 1892, x, Heft 1.

Boltz. Ein Fall von Akromegalie mit bitemporaler Hemianopsie. Deutsche med. Wochenschr., 1892, 27.

Gauthier. Progrès méd., 1892, 1.

Holsti. Ein Fall von Akromegalie. Zeitschr. f. klin. Med., xx, 4–6.

Gause. Deutsche med. Wochenschr., 1892, 40.

Fratnich. Allg. Wiener med. Ztg., 1892, 37.

Souques et Gasne. Nouv. Iconograph. de la Salpêtrière, 1892, 5.

Gessler. Med. Correspondenbl. d. Würtemb. ärztl. Landesvereines, lxiii, 1893, 16.

Arnold. Weitere Beiträge zur Akromegaliefrage. Virchow's Archiv, 1894, cxxxv, Heft 1 (with numerous references).

2. Osteoarthropathy.

Another affection depending on trophic alterations, which in milder cases also manifests itself by changes in the hands and feet, was described in 1890 by P. Marie under the name *ostéoarthropathie hypertrophiante pneumique*. The condition is characterized by a colossal increase in the finger nails, the terminal phalanges of the fingers and toes becoming thickened, and the nails assuming a shape which, when seen from the side, remind one of a parrot's beak (cf. Fig. 157). The resemblance which the fingers bear to drumsticks justifies the term "drumstick fingers" (cf. Fig. 158). In more pronounced cases the ends of the bones of the forearms and of

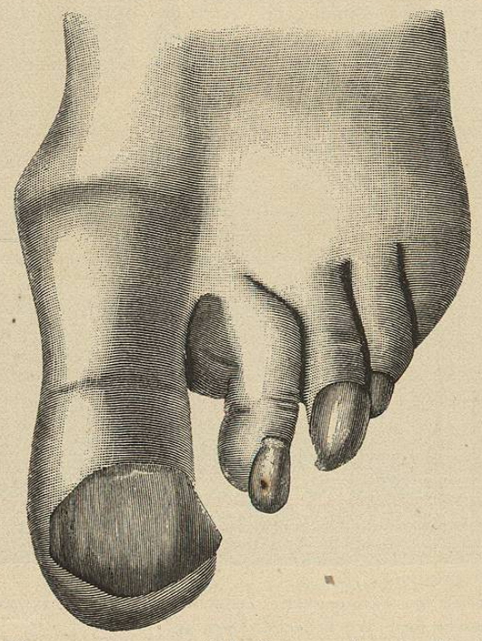

Fig. 157.—Osteoarthropathy. (After Rauzier; Revue de méd., 1891, ii, 1.)

the tibia and fibula also become thickened. The fundamental difference between osteoarthropathy and acromegaly lies in the fact that in the latter we have an enlargement of all the terminal portions of the extremities as well as of the face. The ætiology of the affection, according to Marie, is to be sought

in the existence of pulmonary affections in which extensive decomposition of pus occurs, for which reason this writer has

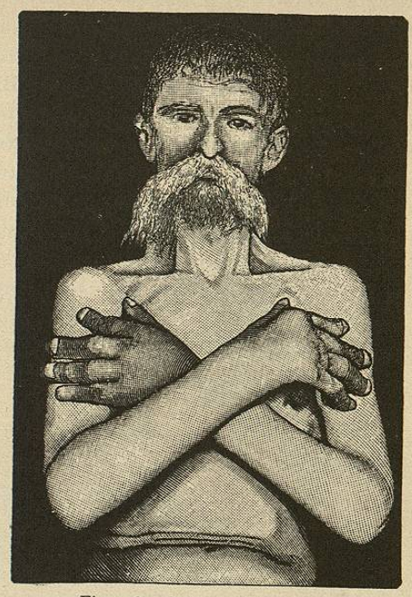

Fig. 158.—Osteoarthropathy.
(After Spillmann and Haushalter; Revue de méd., 1890, x, 5.)

employed the term *pneumique*. For details in connection with this affection the reader is referred to the special articles mentioned below.

Literature.

Marie. Revue de méd., 1890, x, 1 (the original article).
Spillmann et Haushalter. Ibid., 1890, x, 5.
Lefèbre. Thèse de Paris, 1891. Des déformations ostéo-articulaires consécutives a des maladies de l'apparael pleuro-pulmonaire.
Gerhardt. Berliner klin. Wochenschr., 1890, xviii, 52.
Arnold. Beitr. z. path. Anat. u. allg. Path., 1891, x, 1.
Rauzier. Revue de méd., 1891, xi, 1.
Möbius. Münch. med. Wochenschr., 1892, 23.
Minor. Neurol. Centralbl., 1893, 16, p. 565.

APPENDIX.—I. GRAVES' DISEASE—BASEDOW'S DISEASE (GLOTZAUGENKRANKHEIT, CACHEXIE EXOPHTHALMIQUE)—EXOPHTHALMIC GOITRE—TACHYCARDIA STRUMOSA EXOPHTHALMICA.

THIS condition, first described by Parry, later by Graves, and which in Germany is generally known as Basedow's disease, is an affection of the general organism in which certain symptoms referable to the central nervous system are, as a rule, the most prominent features. According to our present conceptions, which are, however, not fully established, exophthalmic goitre can not be regarded as a disease of the nervous system in the stricter sense, since the anatomical seat of the affection is situated not in the nerve tissues but in the thyroid gland. The anatomical changes which have thus far been found in the nervous system (Sattler, Filehne, and others) are not constant, and, as it seems, not essential for the pathogenesis of the disease.

Symptoms.—The three symptoms which are regarded as characteristic of Graves' disease are (1) an excited, accelerated action of the heart, with visible pulsation in the arteries of the neck; (2) enlargement of the thyroid gland; (3) exophthalmos. As a rule, the heart symptoms are the first to appear. The increase in the frequency of the pulse is variable. We may count from a hundred to a hundred and fifty beats a minute, and not infrequently the intensity of the heart beat is more forcible than normal, a circumstance which adds much to the discomfort of the patient. Auscultation does not always reveal abnormalities. Occasionally a systolic souffle is audible, but this is often absent. Enlargement of the heart also has been observed. The extraordinarily strong pulsation in the carotids, which is very conspicuous and easily felt, is in remarkable contrast to the smallness of the pulse wave in the radial artery (Parry).

The swelling of the thyroid is rarely very great. It is usually symmetrical. In the gland itself pulsation can be easily seen, and on palpation a distinct thrill is communicated to the hand. I may say that I have repeatedly seen cases in which the volume of the gland changed from time to time, and that this change became perceptible in a comparatively short time, sometimes even in a few hours.

An arterial souffle is heard over the gland, the cause of which is to be sought in a hypertrophy of the left ventricle

and a disproportionate enlargement of the thyroid artery (P. Guttmann, Deutsche med. Wochenschr., 1893, 11).

The exophthalmos, which is probably always bilateral, also differs in degree in different cases. In the majority, however, it is so marked that the protruding eyeballs can not be completely covered by the lids during sleep. This gives to the patient an appearance which to the layman is both peculiar and repulsive (Fig. 159), and is still more aggravated if the

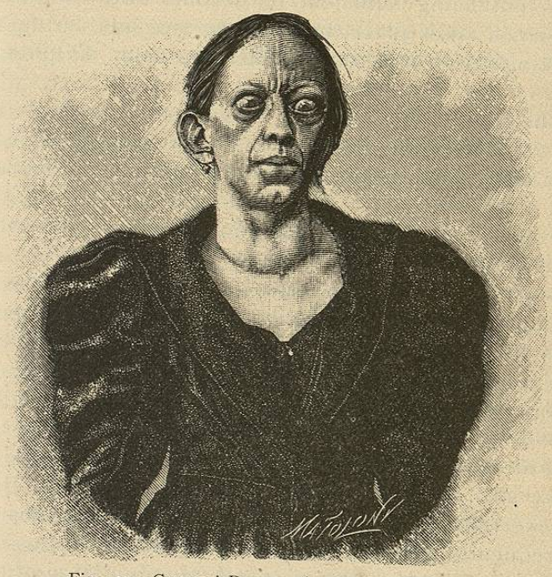

Fig. 159.—GRAVES' DISEASE (personal observation).

upper eyelid does not follow the downward motion of the ball, and thus allows a zone of the sclerotic, 1 to 2 mm. in width, to become visible above the cornea. This defective cooperation of the lid and ball (Graefe's symptom), which happily does not occur very often, makes the patient frequently an object of horror to those about him. The almost complete absence of the involuntary winking of the lid (Stellwag's symptom) is quite conspicuous, especially since the voluntary movements can be made as well as before. We can then easily understand that our patients, particularly when they are ladies of the better classes, avoid as far as possible the contact with friends and acquaintances, as well as with strangers.

Ophthalmoscopically only one characteristic sign has been noted—namely, the spontaneous pulsation of the retinal vessels, discovered by O. Becker. This is not confined to the disk, but can be observed in the retina as well. With this exception there are no changes in the fundus, and eyesight, accommodation, and pupils are entirely normal. Only on the cornea we occasionally find a decrease in sensibility, probably due to the want of moisture on the ball, the normal quantity of the lachrymal fluid not being sufficient on account of the undue evaporation which takes place, because the two lids are far apart, and winking only rarely occurs (Berger, Arch. d'Ophth., 1894, Février).

Insufficiency of convergence, a symptom first described by Möbius, is sometimes observed. If the patient be asked to look at a near point, one eye will soon be found to deviate outward.

Narrowing of the field of vision has been described by Kast and Wilbrandt (Arch. f. Psych., 1890, xxii, 2).

Among the subjective symptoms, in addition to the annoying palpitation already mentioned, a tendency to free perspiration may be noted. Even slight exertion produces a feeling of heat, more especially in the head and neck, so that the patient preferably remains in cool, shady places, and sleeps with as little covering as possible, etc. An actual elevation of temperature is, however, not always objectively demonstrable. This tendency also accounts for the blushing evoked by the least bodily exertion or mental emotion. Both symptoms I have not infrequently seen to occur unilaterally. Trousseau has mentioned the fact that the most gentle stimulation of the skin of the face and neck produces a deep-red mark, designated by him as *tache cérébrale*, a phenomenon, however, which can apparently not always be evoked. All these symptoms are attributable to asthenia of the vaso-motor nerves, as is also the decrease in the resistance which the skin offers to the electrical current, first observed by Charcot (the Charcot-Vigouroux symptom), the saturation of the skin with fluid resulting from the dilatation of its capillaries rendering it a better conductor than it would naturally be in the dry state. In a healthy individual using an electro-motive force of from ten to fifteen volts the resistance amounts to from four to five thousand ohms, while in the course of this disease it measures from three to six hundred ohms, and only increases when the patient

improves. Eulenburg has shown that the presence of this symptom may be of great value for the diagnosis, but its absence proves nothing (Centralblatt f. klin. Med., 1890, 1).

Various nervous disturbances often accompany Graves' disease, among which we should first mention a peculiar paraparesis of the legs (effondement des jambes), a giving way of the legs, as it is called by the English authors, a condition which is associated with a flabbiness of the muscles and a diminution or loss of the patellar reflexes (Charcot). Eulenburg regards the symptoms as a manifestation of hysteria, and as comparable to astasia-abasia (Neurol. Centralbl., 1890, 23). The digestive tract may be implicated, and we may have a well-marked intestinal atony (Federn, Wiener Klinik, 1891, März). Occasionally copious vomiting of watery bile occurs, and this symptom may be of such persistency as to seriously reduce the strength of the patient. Vertigo, buzzing in the ears, sleeplessness, occasional transient dyspnœa, have also been observed. Falling out of the hair of the head and eyebrows is not rare, and I have seen a case of a peasant woman, thirty-eight years old, who, toward the end of the disease, when she was extremely emaciated owing to the persistent diarrhœa and vomiting, had become completely bald. As complications, bone disease (osteomalacia, Köppen, Deutsche Med.-Ztg., 1892, 25, p. 296), chorea, epilepsy, psychoses (Schenk, Inaug.-Dissert., Berlin, 1890), e. g. mania, melancholia, neurasthenic insanity (Hirschel, Jahrb. f. Psychiatrie, 1893, 12), diabetes, tabes (Joffroy, Timotheeff, Inaug.-Dissert., Berlin, 1893), and Addison's disease (Oppenheim) have been observed.

Course.—We should keep in mind that remissions may occur during the course of the disease, and may last even for months or years before further deterioration leading to death takes place. For the prognosis a knowledge of the fact that such remissions can occur is of great importance. Cases which pursue a rapid course from the beginning are exceptional. The onset of the disease may be either brusque or quite gradual. In the first case twelve to fourteen hours are sufficient time for the development of the three cardinal symptoms; in the latter these appear gradually—first the palpitation, then the swelling of the neck, and finally the protrusion of the eyeballs.

Of great interest, because relatively frequently met with, are the cases in which the disease does not reach its full devel-