These questions have been many times discussed, and I shall limit myself to pointing out some of the most salient points. Now in all cases of acromegaly there is disease of the pituitary body. This fact proves, of course, a direct relationship between the two conditions. The question then becomes: Is the acromegalic condition secondary to and dependent on disease of the pituitary body, or is the enlargement of this body (the diseased process always present) one of the phenomena of acromegaly? Some hold the latter view, and look upon the enlargement of the pituitary body as a partial phenomenon of acromegaly as, in fact, one of the symptoms of the disease analogous to the enlargement of the hands and feet. This view, however, seems to me an untenable one, for it certainly does not explain how a new growth like a sarcoma can give rise to acromegaly, and, moreover, in a large number of cases of acromegaly there is no "real" enlargement of the pituitary body, but rather an apparent one causing destruction of the gland itself, such as cystic tumours, colloid degenerations, etc. The balance of evidence certainly points to the conclusion that disease of the pituitary body with consequent loss of its function is the cause of acromegaly, and the development of the anterior lobe of this body from the oral diverticulum and its glandular structure suggest that it, like the thyroid gland, has some "secretory" function influencing the metabolism of the body. The main objections to this view are: (1) That tumours of the pituitary body may exist without symptoms of acromegaly; (2) that the medicinal use of pituitary extracts has little or no influence upon the course of the disease. It is quite true that tumours of the pituitary gland, and indeed tumours which may fairly be supposed to entirely destroy the functions of that body, may be present without causing symptoms of acromegaly. The very same objection has been raised against Addison's disease being dependent on an affection of the suprarenal capsules, for the latter may be so diseased as to be functionless, and this may occur without any symptoms pointing to Addison's disease. It is to be remembered, however, that acromegaly, like Addison's disease, is essentially "chronic" in its course, and death may occur before the development of definite symptoms apart from those of intracranial pressure. In the case above recorded it is certain that disease of the pituitary body had existed for three years and possibly longer, but definite symptoms of acromegaly (apart from those due to an intracranial tumour) were not observed until two years later, and had this patient died one year earlier the case would have been described as disease of the pituitary body without acromegaly.

In the treatment of acromegaly there are two objects: (1) The treatment of the local condition, the pituitary tumour, upon the presence of which depends the symptoms of intracranial pressure, and the object is to relieve such pressure by diminishing the size of the tumour, preventing its growth, or possibly removing it, and, lastly, the palliative one of "trephining"; (2) the treatment of the symptoms due to loss of function of the pituitary body—that is, acromegaly. In the treatment of this disease we cannot expect to obtain such good results as in the treatment of myxoedema, for in the latter there are no local symptoms due to the presence of a tumour. If we suppose that symptoms of acromegaly are due to loss of some secretion of the pituitary body, all that can be expected at the most from a pituitary extract is to influence those symptoms and to prevent further effects, and it can scarcely be expected to influence the pituitary tumour itself. Though good results have been described from the administration of pituitary extracts and from their combination with thyroid extracts, nevertheless their use has generally been most disappointing. In cases where the thyroid extract has proved beneficial it is probable that there has been some accompanying myxoedematous condition.

The want of success in the use of pituitary extracts in cases of acromegaly does not prove that this disease is not due to loss of some "secretion" of the pituitary gland necessary to the economy. Even in the case of the thyroid, we must remember that, though the thyroid extracts are so beneficial in myxoedema in man, they do not prevent symptoms of that disease in a monkey after thyroidectomy, though thyroid grafts are beneficial; moreover, it is to be borne in mind that the active principle of the pituitary gland may be destroyed in the manufacture of the pituitary extracts. Even if it were possible to cure, relieve, or prevent the further progress of symptoms due to the loss of function of the pituitary gland, the problem of dealing with the intracranial tumour would still remain.

If this tumour is malignant, prospects are hopeless; and if

simple, some reduction in its size might occur; and, indeed, in some recorded cases it is stated that under treatment the eyesight has recovered and the headache lessened.

The second question is, What are the relations of acromegaly to giantism? It is an interesting fact that about 20 per cent. of acromegalians are giants, and also that about 14 per cent. of cases of acromegaly commence under 20 years of age. It is also important to observe that when there is congenital absence of the thyroid, cretinism with dwarfing is present. These facts suggest that loss of pituitary function leads to overgrowth with late union of the epiphyses, and that loss of thyroid function has the opposite effect.

Although only a certain proportion of giants are acromegalians, it seems probable that all cases of acromegaly commencing in youth lead to giantism. Nevertheless, there are cases of acromegaly which begin in youth, and which show no giant growth, and this at first sight seems difficult to harmonize with the above suggestion; nevertheless, when it is considered how frequently disease of the pituitary and thyroid glands coexist, it is quite possible that the absence of giant growth in some cases of acromegaly in early life may be explained by a coexisting loss of function of the thyroid gland which may inhibit excessive growth. In any case, it cannot be denied that giantism is a not infrequent symptom of acromegaly.

CASE OF CHRONIC ACROMEGALY.

By C. H. CATTLE, M.D., M.R.C.P.,
Assistant Physician to the Nottingham General Hospital.

THE following notes, with the accompanying photographs, will serve to give a tolerably accurate description of the disease acromegaly, and although over 200 well-authenticated cases have already been placed on record, it must still be regarded as a rare disease.

Fig. 1.

History.—A. F., an unmarried woman, aged 30, was first seen at the Nottingham General Hospital on July 14th, 1902. She stated that her health began to fail four years before, and that three years previously she had been treated at this hospital. The out-patient notes of that date state, among other things, "face somewhat acromegalic." There was nothing of importance etiologically in the patient's personal or family history. Since the present illness began the following have been the most

prominent symptoms: Violent paroxysmal attacks of headache, sometimes accompanied by vomiting; pains in the joints; gradually increasing debility. Although not anaemic-looking menstruation had been scanty for many months, and had entirely ceased for the last six months. As the patient has now been under observation for upwards of six months, it will be seen that the amenorrhoea has lasted over a year. She used to wear boots of No. 4 size, and now requires No. 6.

Appearance and Physical Examination, July 14th, 1902.—The attention is at once arrested by the patient's generally enlarged and massive-looking head, more especially the elongated and broadened nose and thickened lips. The hands are much enlarged, the fingers being much broadened and flattened. The patient is only of medium height for a woman, yet the hands, and also the feet, are larger than those of a man of more than average height and strength. The skin of the face looks muddy and pigmented. Patient complains of thirst and excessive sweating. The thyroid gland is uniformly enlarged, the pulse average, 120; eyeballs somewhat prominent, but von Graefe's sign is absent. The teeth meet comfortably and easily, thus the marked prognathism or protrusion of the lower jaw, so often met with in this disease, is absent.

The head is thrown forward owing to a rounded cervico-dorsal curvature. The sternum is prominent and appears broadened, thickened, and more massive than normal. Over the surface of the trunk are numerous, soft, pigmented, and pedunculated little tumours about 0.5 cm. in diameter. These are mentioned by Sternberg and other authorities on this disease.

The fact of the case being still in a somewhat early stage may account for the absence of some of the features of the established disease. Thus there are no changes in the fundi oculi. There is no evidence, such as the presence of bi-temporal hemianopia, to suggest compression of the optic chiasma by an enlarged pituitary body. This, the classical symptom of compression of the chiasma, is by no means constant in even well-developed acromegaly, other pressure effects, for example, homonymous hemianopia, optic neuritis or atrophy, or oculo-motor palsies, being at least equally common. Another associated symptom is absent in this case, namely, glycosuria.

Enlargement of the thyroid gland is fairly commonly met

Fig. 2.

with in acromegaly. This symptom in the case under notice, together with the constantly quick pulse, prominent eyeballs, pigmentation and sweating, seems to suggest some relationship between this disease and Graves's disease. Such a combination has been described by Murray.¹ The functional relationships of the ductless glands to each other seem to be

as yet but little understood. Thus the pituitary body contains iodothyron, a substance also contained in the thyroid, and it has been found enlarged in myxoedema and cretinism. So also in acromegaly the thyroid is often enlarged, thus appearing to be an attempt at compensation; but the puzzling point about it is that this apparently benign effort of Nature, so far from alleviating the disease, only makes matters worse. The sexual glands also in acromegaly are often atrophied or functionless. The thymus is often, but not invariably, of large size.

Notwithstanding many anomalies and difficulties, Pierre Marie's hypothesis of the pathology of the disease—that it depends on loss of function of the pituitary body—still holds the field. The well-known cases in which this organ has been destroyed by tumour, yet without causing acromegaly, may be compared with cases in which the adrenals have been destroyed (especially by cancer) without producing Addison's disease. With the latter acromegaly also presents another singular resemblance—namely, in the comparative failure of treatment by extracts of the respective glands. So far as I am aware no cure either of pronounced Addison's disease or of acromegaly has been recorded. Thus the brilliant prospects of treatment by means of animal extracts, opened up by the signal success of thyroid treatment, have not as yet been realized.

The condition of the patient during the seven months I have known her has remained much the same, though the physiognomy of the disease appears to have become more marked, and the patient herself thinks her hands are getting larger. Her manner is generally bright and cheerful, not morose or peevish, as is said to be often the case. The drugs which have been given have been of an ordinary character, and directed to the relief of symptoms. Three varieties of the disease are described: (1) The benign, which may run a course of as long as 50 years; (2) the chronic, to which this case probably belongs; (3) the acute, lasting 3 to 4 years. In the latter class, sarcomatous tumours of the pituitary gland have been the cause of death.

REFERENCE.

¹ *Edin. Med. Journ.*, 1897.

THE MEANING OF THE TERM "NEURASTHENIA" AND THE ETIOLOGY OF THE DISEASE.

By P. C. SMITH, L.R.C.P., L.R.C.S., L.F.P.S.G.,
Middleton St. George, Durham.

PROFESSOR CLIFFORD ALBUTT, in his clear and interesting paper read before the Section of Psychological Medicine of the British Medical Association,¹ pointed out that a common and mischievous error in the use of names is the etymological; that the literal meaning of a clinical name is simple, whereas the name itself is best used to connote the complex groups of factors that make up a disease; and that, in particular, the term "neurasthenia" is wasted if applied to simple nervous debility. This is true; yet it is the fact that there is a condition not far removed from the etymological meaning of neurasthenia which stands in need of a name; for it undoubtedly exists, it is pathological, it is an important factor in the etiology of the disease neurasthenia, and, it may be added, it is one of the most potent factors of unhappiness among men. On the analogy of the terms hysteria major and hysteria minor, we may perhaps describe this lesser (but more important) condition as neurasthenia minor, giving the name neurasthenia major to the recognized disease.

Neurasthenia minor is hereditary (though the heredity is often, if not usually, transmuted), and is also congenital. It consists apparently of an inborn feebleness of nervous impulses, both centripetal and centrifugal. Young children who suffer from it are often bright and lively, but they tire easily, and suffer very frequently from infantile complaints. As they grow older, one notices that their sensory acuteness and power of observation are below the normal. All will remember how, among their childish playmates, some were quick at finding a lost ball, and others very slow. Sufferers from neurasthenia minor are always slow. Co-ordination, too, is not good; appropriate action does not follow promptly on sensation, as in the case of healthy children; so that these subjects are not good at games. How far the memory is affected, apart from that feebleness which results necessarily from feeble primary impressions, it is difficult to say. Perseverance, attention, and application are deficient, and dawdling becomes a habit. The will is weak; all children are suggestible, but these more than others. Among them