been elucidated. The results described above do, however, show the prophylactic importance of slow decompression, and suggest that with careful attention to various details the upper limits of pressure, both for caissons and diving operations, can be much extended.

REFERENCES.

¹ Quoted by Paul Bert, *La Pression Barométrique*, 1878, p. 384.
² *Lufdruck Erkrankungen*, etc., by Heller, Mager, and v. Schötter, Wien, 1900, p. 471. ³ *Journal of Physiology*, May, 1905.

A CASE OF EXOPHTHALMIC GOÏTRE,

WITH REMARKS ON

THE PROBABLE NATURE OF THE DISEASE.

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THE following case has been selected (chiefly because the patient is at present under treatment) from amongst some forty to fifty cases of goitre, both simple and exophthalmic, which have been treated successfully upon the same lines during the past twelve years.

Mrs. R., aged 51, married, of the poorer class, was first seen by me on July 12th, 1905; since then I have seen her eleven times in all.

SYMPTOMS.

A uniformly enlarged right lobe of the thyroid was easily seen and felt, and rather soft to the touch, measuring not quite 4 in. across; on the left side was a prominent hard knot, 1½ in. in diameter, with the appearance and feeling of fibrous or tense cystic tissue. The enlargement on the right side had been noticed by the patient for certainly fifteen months; that on the left had existed for about fifteen years, and had been professionally treated many years ago. The pulsation of the carotids gave an impulse to the swelling on the right side.

Exophthalmos existed in a moderate degree, and von Graefe's sign was present. There was oedema of the eyelids in varying amount at different times. In addition to a general restlessness, shown in fidgety movements of hands, arms and head, a fine tremor of the hands was plainly seen.

The patient complained of palpitation, and it was observed that the action of the heart was rapid, and was increased by excitement or emotion. The pulse, usually regular, has not been below 112. The patient, intolerant of strangers, was chiefly in a state of subdued excitement. She was emaciated, and stated she had lately become thinner, but there was no loss of strength. She had to make a great effort to raise her voice above a whisper. She drove four miles in an open cart, on some of the coldest days, to the surgery, and did not complain of the cold; perspiration was, however, free upon slight exertion. There were pigmentary changes on her face, neck, and hands, and she stated that she was changed in colour. There was no itching. Appetite was good, and the bowels naturally regular.

RESULTS OF TREATMENT.

The treatment given was, I confess, almost entirely symptomatic. Rest, in the horizontal position, during a portion of the day, and in the open air when possible. The drugs given were tincture of belladonna and liquor arsenicalis, of each 5 minims; potassium bromide, 10 gr.; and tincture of digitalis, 8 minims—three times a day, in water, after meals. Liniment of iodine was applied externally, eleven times altogether.

The right lobe is now reduced to little over one half of its former size. The knot on the left is softer and smaller. The exophthalmos is scarcely noticeable. The patient of her own accord has frequently said she was better. There is still the tremor of the hands, but she says she does not notice it when at home. She feels much better when she is quite alone. She complained of dryness of the throat after taking the medicine (belladonna), but not before. Twice I have omitted this ingredient, and twice the arsenic. The pupils are moderately dilated, the left more than the right. She does not complain of palpitation, and the pulse is now just 100. She now has to make no effort to raise her voice.

NATURE OF THE DISEASE.

In certain parts of East Anglia simple goitre is very common. The exophthalmic form is, I think, also frequently seen. In the textbooks the disease is classed with those of glands, but is it not probable that it is essentially a nervous disease? It is well known that many of the symptoms are suggestive of a nervous origin, and that the disease is sometimes associated with other nervous disorders; and, may I ask, is not that nervous origin intimately connected with the disturbances of the circulation? Let us inquire what nervous factors would produce tachycardia, palpitation, pulsation of the carotids, and from these possibly cardiac hypertrophy or dilatation.

The patients are readily upset by a loud noise, or good or bad news; they are irritable, peevish, and easily given

to tears. These symptoms certainly suggest the sympathetic system as the origin, but not more than the others. To what symptoms would disease of the sympathetic ganglia connected with the cardiac plexus, for example, be expected to give rise? To an inhibition of function, certainly; to a loss of tone in the large arteries. This loss of tone, produced by disordered action of vaso-motor nerves, would cause a general dilatation of the large arteries; it would be first felt on the right side and in the innominate artery, the first large vessel arising from the aorta; it would be followed in a direct line into the common carotid, the external carotid, and into the first branch of the external carotid—that is, the superior thyroid artery. Similarly, the loss of tone producing dilatation in the thyroid axis would be continued into the inferior thyroid artery. This would account for the usual prior enlargement of the right lobe of the thyroid gland. The proximity of the middle cervical ganglion which gives off the middle cardiac nerve; the sympathetic nerve at the back of the sheath of the common carotid artery; the upper and lower cervical ganglia with the internal carotid and subclavian arteries respectively are to be remembered.

It seems reasonable to argue that the tachycardia, and possibly the palpitation, may be caused by communication from the last cervical ganglion, through the accelerator nerves, as it is well known that when stimulated these nerves produce a quickening of the heart's beat. It is well known, also, that division of the cervical sympathetic causes vascular dilatation of the face, which is accompanied by increased perspiration.

As regards the exophthalmos, a similar argument will obtain from the contiguity of the sympathetic root of the lenticular ganglion with the ophthalmic artery.

The persistent or enlarged thymus, the enlarged lymphatic glands, the increased connective tissue in the neck, are not these due simply to increased vascularization?

What actual evidence is there that these diseases really originate in the sympathetic ganglia? All the evidence of which I am aware is that found by Dr. Greenfield. He has described swellings of the sympathetic ganglia, invasion of their tissue by leucocytes, and degenerative changes in the ganglion cells. If these morbid changes are constant, what more can we want? In short, may not the hypertrophy and over-activity of the thyroid gland, the exophthalmos, the persistent thymus, the enlarged lymphatic glands, the increased connective tissue in the neck, the tachycardia, palpitation, and tremor, besides the other subjective symptoms, be all the symptoms of a disease of some of the chain of sympathetic ganglia? If so, I see no reason why ordinary simple goitre and the exophthalmic form should not be varieties of the same disease, and that a disease of the sympathetic ganglia.

A CASE OF WIDESPREAD MOTOR PARALYSIS
DUE TO MULTIPLE SYMMETRICAL
PERIPHERAL NEURITIS,FOLLOWING AN UNUSUALLY MILD ATTACK OF SCARLET
FEVER.By FREDERICK W. PRICE, M.B., C.M., M.R.C.P.,
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It is well known that peripheral neuritis may occur as a sequela in many of the specific febrile affections, and Dr. Buzzard, among others, has pointed out that a motor paralysis having a very widespread distribution may be caused by a lesion of the periphery of the nerve trunks. The following is a remarkable example of such a case occurring in the sequel of an unusually mild attack of scarlet fever. When the patient first came under observation it was difficult to make a diagnosis between peripheral neuritis and acute anterior poliomyelitis, but the subsequent progress put the matter beyond all doubt. The case is also interesting, because during its course it presented the features of what looked like a very brief attack of acute nephritis.

REPORT OF THE CASE.

A girl, aged 11 years, was admitted to Westminster Hospital on November 25th, with practically complete loss of power in the legs, and some paresis of both arms.