ON ATROPHY OF THE THYROID BODY, FOLLOWING PRESSURE ON THE RECURRENT LARYNGEAL NERVE.

By W. HALE WHITE, M.D.,

Assistant-Physician to Guy's Hospital.

DURING the last winter, I made about 50 *post mortem* examinations, and in many of them looked at the thyroid body, quite irrespectively of the cause of death. The smallest thyroid I found weighed only nine grammes, and was very fibrous in appearance on section. It was taken from the first of the appended cases. Microscopical examination of it showed that it had undergone a very considerable degree of atrophy, there being very few healthy vesicles and much increased fibrous tissue. On looking through the museum at Guy's Hospital, I found one specimen of an aneurysm pressing on the left recurrent laryngeal nerve. It forms the second of the appended cases. Microscopic examination of the thyroid gland showed atrophy even more extreme than in the first case. No specimen of thyroid I have ever examined, and no description of the organ I have met with, lend any countenance to the supposition that the gland could present such an appearance as is here shown, in these two cases, and yet be looked upon as normal. Considering the importance that atrophy of the thyroid body has assumed since the publication of the account of Kocher's patients, in whom myxœdema followed excision of the thyroid, and since Mr. Victor Horsley's experiments, in which it followed in monkeys after excision of that body, I thought it would be quite worth while to publish these two cases of atrophy of the thyroid in patients in whom the recurrent laryngeal nerve was pressed upon, in order that others, who have an opportunity of making *post mortem* examinations in similar cases, may observe whether the thyroid is invariably atrophied. Judging from these two cases, it would seem that that nerve is the trophic nerve of the gland; and had it not been for the great difficulty of obtaining a full vivisection licence, I should have tried to settle the question myself by experiments on animals. It will be noted that the weight, namely, nine grammes in the first case, is less than any of the adult male weights given in Dr. Stephen Mackenzie's tables in the *Medico-Chirurgical Transactions*, vol. lxvii. If subsequent observation should show that one or both recurrent laryngeal nerves are the trophic nerves of the thyroid gland, the relation of myxœdema to cases of aneurysm or tumour in which the recurrent laryngeal nerves are pressed upon will become important. Museum specimens have not aided me much in my attempts to discover whether atrophy of the thyroid is an universal concomitant of pressure on the recurrent laryngeal, for as a rule the thyroid body is not preserved with the aneurysm; still, I think specimen No. 3,186 in the College of Surgeons Museum is instructive, for it will be observed that in it the thyroid is very small; and it is a case in which an aneurysm of the transverse arch pressed on the recurrent laryngeal nerve. The diminutive size of the thyroid cannot be accounted for by preservation in spirits, for that body is attached to specimens No. 3,123 and 3,124, and is in both of them considerably larger than in No. 3,186. The thyroid is small in specimen 3,097, in which the recurrent laryngeal nerve was pressed upon by an aneurysm; but, as it is possible that some may have been cut away to mount the specimen so as to show the arteries to advantage, I refrain from quoting the case in support of those which I here publish.

Anatomy-books are silent on the question as to whether the recurrent laryngeal nerve supplies the thyroid gland, but some dissections I have made show minute branches from the nerve to the gland. Appended are the two cases. I am much indebted to Drs. Wilks and Goodhart for permission to use them.

CASE I.—William E., aged 54, was admitted into Guy's Hospital, under Dr. Goodhart, on February 23rd, 1885. His previous illnesses had been gonorrhœa, chancre, and rheumatism. Fifteen months ago, he was admitted into a country hospital for bronchitis; as his symptoms became obscure, he was removed to London, and admitted into Guy's Hospital. It was then noticed that he had a barking laryngeal cough; less air entered the left chest than the right; the left vocal cord did not move so well as the right. No treatment affected him; the cough became worse; he got some consolidation of the left lung, and gradually sank and died. I made the *post mortem* examination, and the following is a brief abstract of the report. He was a healthy-looking man, fairly nourished. The pleura were very adherent; the lungs were congested, with much pus in the smaller tubes. The left crico-arytenoid muscle was atrophied. The size, weight, and muscular substance of the heart were normal; there were recent vegetations on

the mitral and aortic valves. Close to, behind, but not implicating the innominate and left carotid, was an aneurysmal sac, springing from the aorta; it bulged more to the left than the right, pressing on the trachea, the left recurrent laryngeal nerve, and the left bronchus. The whole of the arch of the aorta was much distended and atheromatous. The thyroid body was regular in shape, very small, fibrous-looking, of normal colour, and weighed just over nine grammes. Microscopic sections of the thyroid were prepared in the usual way; the following is a description of the appearances presented; they may be seen on reference to the accompanying sketch. The vesicles were much smaller

Section of Thyroid Body from Case 1. Shows the extreme degree of atrophy. Some of the atrophied vesicles contain a little gelatinous material; others some granular matter; most have lost their epithelial lining. There is an increased amount of fibrous tissue; and also a multiplication of nuclei. Hartnack, Oct. 3, Obj. 3.

than natural, being, on the average, only a quarter of their natural size, and often much less. Their contents were broken up into little rounded irregular masses, instead of forming one homogeneous whole; often, too, the vesicles were not completely filled by the jelly-like contents, the composition of which was apparently changed, for, instead of staining of an uniformly light blue tint with logwood, they were often of a brownish colour, and of a granular appearance. In some parts, there seemed to be an engorgement of the lymphatics in the interstices of the gland, possibly owing to the rupture of some of the vesicles. The epithelial lining in some places could not be made out; in others it was much broken up, some of the vesicles being filled with a heterogeneous collection of irregular masses of hyaline contents and broken epithelial cells. There was, undoubtedly, some increase of fibrous tissue between the vesicles; this was evidenced by the increase of fibres and nuclei; several wandering cells might also be seen. This evidence of sclerotic change, as shown by the microscope, tallied with the increased hardness that the gland presented to the touch. Although the shrinking of the vesicle would of itself tend to make the fibrous tissue increased in quantity, still the increase here was much more than could be accounted for by that explanation. The vessels were normal.

CASE II.—James H., aged 45, was admitted, under Dr. Wilks, into Stephen Ward, June 14th, 1881. He had had a chancre, had been in India, and had dysentery. He was admitted with pain between the shoulders and right hemiplegia. The left apex was dull; he had a short cough. There was a systolic *bruit* over the third right costal cartilage, no pulse in the left carotid or left subclavian. The left vocal cord did not move. He gradually sank and died.

At the *post mortem* examination, it was found that there was a very large irregular aneurysmal sac, involving the ascending and transverse part of the arch of the aorta. It had ruptured into the œsophagus, and the stomach was full of blood; it extended high into the neck to within an inch and a half of the thyroid cartilage; it pressed somewhat upon the trachea. The innominate was normal in size; the left carotid was entirely obliterated at its origin in the aorta. Opposite the cricoid cartilage it was full of dark firm *ante mortem* coagulum; above this point it was diminished in calibre. The left subclavian artery was small, but still patent; the aneurysmal part of the aorta was extremely diseased, being covered with grey and yellow patches; the aortic valves were healthy; the coronary valves were not implicated. Both lungs were adherent to the hinder part of the aneurysmal sac; in both the adherent part was in a state of pneumonia, with a central gangrenous cavity. On the right side of the brain was a brownish degenerate patch affecting the optic thalamus, the internal capsule, and a little piece of the lenticular nucleus. The left posterior crico-arytenoid and lateral crico-arytenoid muscles were much wasted; the left recurrent laryngeal nerve was closely adherent to the wall of the aneurysmal sac, and was thus

considerably pressed upon. The testes and lungs were fibrous; there were old scars on the forehead, and a pigmented scar on the right leg. The aneurysm had not pressed directly upon the thyroid gland.

In this case, the weight and appearance of the thyroid were not noticed at the *post mortem* examination, but the trachea, together with the aneurysm, were preserved for the museum. I was well able to cut off a piece of the gland and examine it microscopically. The section showed just the same changes as the first section, but in a much greater degree, for the organ was little else than a mass of ill-formed fibrous tissue. Here and there a few patches of the material which fills the vesicles were to be seen, and in some places collections of irregular masses of the same substance; but in no case was any epithelial lining to the vesicles to be discovered. There were fewer nuclei than in the first specimen; in short, the fibrous change was much further advanced.

NAPIER (NEW ZEALAND) AS A HEALTH-RESORT.

By F. H. LESLIE ALLEN, M.D.

So much has been written on health-resorts, and so many places have been recommended—each supposed to possess some peculiar advantage, and yet each in turn supplanted by another—that it may seem unadvisable to multiply the number from which the medical man has to choose when asked that question frequently put to him by the anxious patient: "What is the best climate for me? or, Where shall I spend the winter?"

In the present instance, however, I think I need make no apology in bringing under the notice of the profession a climate which has only to be known in order to be appreciated for its peculiar adaptation to pulmonary cases—namely, that of Napier, in New Zealand. Much attention has lately been directed to New Zealand, and many works have been written containing valuable information about this beautiful country; but as a health-resort it has not yet become sufficiently known.

During the last few years, sea-voyages have been much recommended to patients threatened with phthisis, and the voyage to New Zealand possesses great advantages, as it gives the invalid time to gain the full benefit of the sea-air; but it is from the voyage itself that the chief amount of good is expected; and so little is known of the climate of New Zealand, that a stay is not often contemplated; or possibly, on his arrival, the patient may be disappointed with the country, and so may return home without having seen much of it. The reason of this probably is that he has been recommended in a general way to New Zealand, the great variety of the climate of the different parts not being sufficiently known. The islands extend from latitude 34° to latitude 47° S.; so that it is apparent, from a mere glance at their geographical position, how much the climate of the northern and southern extremities must differ; and, taking into account the conformation of the country, and its coast-line, its varied geological formation, and the manner in which parts are sheltered from, or exposed to the prevailing winds, there are perhaps few countries which present such a diversity of climate as New Zealand.

In my own case, an attack of hæmoptysis and subsequent threatening symptoms rendered it dangerous for me to remain at home, and my medical colleagues, therefore, advised me to go to New Zealand. On arriving at Auckland, I was disappointed on finding its climate moist and relaxing; the heat was oppressive, but not so much from its actual degree, as from the accompanying humidity of the atmosphere; the evenings, on the other hand, were chilly, and the fall in temperature, causing a deposit of moisture, occasioned a feeling of dampness.

After a month's trial of Auckland, I visited Tarrang, a town about 130 miles to the south, in a picturesque neighbourhood, which was highly recommended to me; but in this climate, also, I was disappointed, though it is decidedly superior to Auckland. Eventually, I came to Napier, in Hawke's Bay, 400 miles to the south of Auckland; this locality I had already heard praised by several of the medical men of Auckland, and, from the markedly beneficial effect it soon produced in my case, I found the praise was well deserved. I have had the advantage of travelling for some time in the Mediterranean, and of visiting some of the usual health-resorts, and I have no hesitation in stating that I consider the climate of Napier far superior to anything I have before experienced; it possesses properties not often found combined: it is sedative, and yet tonic; it soothes the irritable bronchi, and yet is sufficiently bracing to exert an invigorating effect on the system; fog is unknown, and throughout the winter there is bright sunshine. The town is built on a peninsula called Seaside

Island, which rises to the height of 200 or 300 feet above the sea-level; the soil is sandy and absorptive, and, as the annual rainfall is not great, the air is peculiarly dry. From the hills, on which the villas of the principal residents are built, the view is charming, and reminds one somewhat of the Bay of Naples; at the foot of the hills, a level sandy beach reaches in a gentle curve for miles, and around each side of the bay, in horseshoe form, stretch ranges of lofty hills. Inland lies a fine alluvial country towards the south, consisting of some of the richest land in New Zealand, green with luxuriant pasture, and studded with trees, principally the weeping willow, the eucalyptus, and various pines.

The town contains from 6,000 to 7,000 inhabitants; there are first-class hotels, and a capital theatre.

The peculiar clearness and invigorating freshness of the climate of Napier have to be experienced in order to be fully appreciated. It is hot for two or three months in the summer, yet, owing to the dryness of the air, the heat is not oppressive; in the winter, the morning and evening air is often sharp, and there may be a slight touch of frost occasionally, but it quite disappears at sunrise, and the days are as bright as in the summer.

The greatest recommendation, however, which I can adduce, is the fact that this part of New Zealand is now considered by a large number of the profession in that country to be the most favourable situation for patients troubled with chronic pulmonary affections, and the local medical men are almost unanimous in thinking the climate one of the finest in the world. I have had reliable testimony on all hands of the curative effects of this climate in disorders of the lungs and air-passages, and could bring forward many cases in proof of the above statements; I trust, however, that these few remarks may be sufficient to direct the attention of the profession to the advantages of Napier as a health-resort, and may, to some extent, serve as a guide to those who may wish to send patients to New Zealand.

OBSTETRIC MEMORANDA.

RUPTURE OF THE UTERUS: RAPID DEATH.

ON May 22nd, at 7 P.M., I was called to attend Mrs. G., who was stated to have been in labour from 5 o'clock, and expected to be confined every minute. This was her ninth child. She was about 44 years of age, a large, anæmic, flabby-looking woman, with weak action of the heart; and she had always suffered badly from *post partum* hæmorrhage. On examination, I found the head in the vagina, almost at the vulva; and, although violent pains occurred every three or four minutes, labour seemed to make little or no advance. Having waited about fifteen minutes, during an unusually severe pain I heard distinctly a "loud snap." The head now receded (but only slightly), and the pains suddenly ceased. After waiting ten minutes, during which there were but two slight pains, I gave a dose of ergotine (hypodermically), and decided on delivering her. With a little difficulty, I introduced my left hand, and succeeded in removing a large still-born child, which had double hare-lip and spina bifida, and appeared to have been about three weeks dead; in fact, it was quite fetid. The delivery of the child was followed by a gush of dark unhealthy looking blood; and, although the uterus contracted firmly, it receded quite far up into the abdominal cavity. The mother seemed strong and well, and made urgent inquiries about the child: how long it was dead, etc. She further stated that, about three weeks previously, she had a bad fright whilst driving through the town, and had never felt life in the child since. The uterus remained firmly contracted, and there was no sign of hæmorrhage externally. In about ten or twelve minutes, the patient began to become anxious and restless, and to toss about her arms; and replied, on being questioned, that there must be something wrong with her heart. The pulse had become very rapid and small, and the anxiety of the patient more marked. I examined the heart: the action was violent and tumultuous; the sounds were hardly discernible one from the other. I gave brandy repeatedly, and kept firm pressure on the uterus; but there was no sign of the placenta being expelled. After waiting for an hour, when collapse seemed imminent, I introduced my left hand, which, to my dismay, went through an enormous rent in the uterus, at the junction of the body with the cervix. Of course, I immediately withdrew my hand, and, getting the uterus firmly pressed down, I removed the placenta with a little trouble. No external hæmorrhage whatever followed; and, notwithstanding large doses of brandy and frequent subcutaneous injections of ether, she sank rapidly, and died at 10.15, about three hours after the rupture occurred.

Carlow. WILKINSON H. O'MEARA, M.D. K.C.C.P.I.