PARTIAL THYROIDECTOMY.

By JAMES HARPER, M.A., M.B., Ch.B., Surgeon, Diseases of the Throat, Nose, and Ear, Royal Infirmary, Glasgow.

OPERATIONS on the thyroid body for the removal of growths and for the partial removal of the gland have been attended by certain recognised dangers. The most important of these are hæmorrhage at the time of operation and post-operative hæmorrhage. Shock to the patient, both at the time of operation and afterwards, is frequently marked, while the involvement of the recurrent laryngeal nerve, causing paralysis of the vocal cords, is a not infrequent occurrence. The Kocher operation, or some modification of it, is usually employed in dealing with these growths. The writer in this article describes a method which he has been using for some time, and which has invariably been successful in eliminating the recognised dangers attendant to the Kocher operation. Researches into the condition are at present being carried out, and this paper is merely a preliminary announcement, written in the hope that those interested in the subject may try this method. In a series of twenty cases of operation on the thyroid for the removal of thyroid growths of all sizes and of varying forms, the operator has never found it necessary to ligature an artery, and in no case has there been any post-operative hæmorrhage. Kocher recommends that the superior and inferior thyroid arteries should be ligatured, but the writer has found that this is unnecessary. Shock to the patient at the time of operation is practically non-existent, while in all the cases recovery has been uneventful. The recurrent laryngeal nerve has in no case been interfered with, and he believes that the risk of injury to this nerve is reduced to a minimum. Of the twenty cases upon which operation has been performed, in sixteen of them the growth was in the right lobe. Two of the cases, both in young men, were simple or parenchymatous goitre, consisting of a profuse overgrowth of the whole of the thyroid body, while in one case the growth was a small adenoma about the size of a hen's egg at the junction of the isthmus and the left lobe. One case was that of a rudimentary thyroid with the thyro-glossal duct still patent up to the level of the hyoid bone.

The operation is conducted as follows: an incision is made over the most prominent part of the growth from the anterior border of the sterno-mastoid muscle on the one side to the

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sterno-mastoid muscle on the other. A slightly curved incision is employed, parallel with the lines of the neck. The platysma and deep fascia are divided, and the sterno-hyoid, sterno-thyroid, and omo-hyoid muscles are brought into view. It is frequently found that there is a communicating vein between the anterior jugulars. This vein is ligatured and cut across. The sterno-hyoid and sterno-thyroid muscles are divided, and the omo-hyoid muscle may be divided or pulled to the side. The capsule of the gland is now brought into view. In certain cases a plexus of veins is found radiating over the anterior surface of the capsule. These veins are secured with pressure forceps and are the only veins interfered with. A horizontal incision is now made through the capsule along the whole length of the isthmus. The forefinger of the right hand is then inserted through this incision in the capsule, and the gland separated from the capsule. The writer has made it a practice of removing the whole of the lobe of the thyroid along with the isthmus, where the growth has reached the size of a hen's egg, since he has found that in those cases where the growth has reached this dimension the lobe of the thyroid is also affected. He finds no difficulty in removing the thyroid in this manner with the forefinger, and in no case has he found it necessary to ligature an artery. The gland comes away easily from the capsule and arterial hæmorrhage does not occur. The sterno-mastoid muscle being pulled aside, the growth and the remainder of the lobe of the thyroid are brought out of the incision. At times, the isthmus is firmly adherent to the trachea, but it is gradually separated off the trachea with the forefinger. The isthmus is then cut across and the stump ligatured with a strong catgut suture, which is threaded through the substance of the gland. There is no bleeding when the isthmus is cut across, the ligature being applied to prevent the escape of thyroid secretion into the wound.

The writer considers that the principal point of the operation consists in removing the thyroid out of its capsule, using only the finger. No dissecting forceps, knife, or scissors are used, and it is to this fact that he attributes the total absence of arterial hæmorrhage. The veins on the capsule are now ligatured—usually only three ligatures are necessary. The deep fascia and the skin are stitched together, and a small amount of dry packing is left very loosely in the cavity and allowed to remain in for twenty-four hours. In no case has there been any post-operative hæmorrhage. At the end of twenty-four hours the packing is

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removed and a few inches inserted to act as a drain. This drain is changed daily for a week, at the end of which time a stitch is put in to completely close the wound.

A few of the typical cases are here appended :—

Mrs M'K., aged 35 years, consulted me on 11th March 1920 regarding a swelling in her neck, which had been gradually increasing in size for the past three years. She complained of difficulty in swallowing and shortness of breath, especially on lying down. There was a large growth, obviously cystic in character, in the right lobe of the thyroid. An operation was performed in the manner described above, and a large cyst, along with the remains of the right lobe of the thyroid which had atrophied and merely formed a thin covering to the cyst, was removed. The cyst measured 8½ ins. by 9 ins. in circumference and was full of glairy fluid, while the cyst wall was very thick and tough. Recovery was uneventful.

Mrs C., aged 30 years, consulted me on 21st February 1920 regarding a gradual increase in the size of her neck, which she had noticed for the past five years. She became short of breath while walking about, but had no difficulty in breathing when lying down. The right lobe was removed with a large adenoma measuring 6½ ins. by 7 ins. Recovery was uneventful.

Jeanie S., aged 43 years, consulted me on 3rd April 1920 regarding a swelling in her neck, which had been gradually increasing in size for the past three years. The swelling was confined to the right lobe of the thyroid. Her only symptom was that of feeling "choky" at times. At the operation the whole of the right lobe of the thyroid was found to be involved in the overgrowth. There was a protrusion into the neck behind the right clavicle. The right lobe and isthmus were removed, and recovery was uneventful.

Peter R., aged 16 years, consulted me on 21st June 1920 regarding a swelling in his neck. He had no symptoms relating to swallowing or breathing, but complained of great difficulty in wearing a collar. His neck measured 18 ins. in circumference. There was a symmetrical swelling of the whole of the thyroid, which had gradually increased in size during the past two years. The right lobe and isthmus were removed with some difficulty, owing to very firm adhesions, but there was no trouble from hæmorrhage, and recovery was uneventful. Examinations of sections showed a general subacute inflammation of the gland tissue. There were some areas where a notable increase in colloid material had occurred. Seen two months later the left lobe had contracted to its normal size.

Alexander C., aged 16 years, consulted me on 3rd August 1920 for a similar condition. He, however, complained in addition of difficulty

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in breathing after exertion. The right lobe and isthmus were removed, and recovery was uneventful. Sections of the gland showed the swelling to be a true hypertrophy with not much increase in the colloid material.

Catherine C., aged 37 years, who consulted me on 23rd January 1920 complained of marked difficulty in swallowing and difficulty in breathing while in bed. She was very neurotic, with a slight degree of exophthalmos and with marked tremor of the hands. She complained of sleeplessness at night and of "seeing things" in a dark room. A small growth in the form of an adenoma about the size of a hen's egg which was present between the œsophagus and the trachea, was removed, along with the right lobe. Patient was very excited at night for two days, but was quieted with bromide. Otherwise recovery was uneventful. Seen on 18th June 1920 all symptoms had disappeared, the nervousness was gone, and she was feeling in very good health.

Mrs H., aged 32 years, consulted me on 1st October 1920 regarding a swelling in her neck, which was causing difficulty in breathing when she lay down at night. A large fibro-adenoma 7 ins. by $7\frac{1}{2}$ ins., along with the remains of the right lobe of the thyroid, was removed. The remains of the right lobe of the thyroid on being examined was found to be very cystic, these cysts being full of blood. Recovery was uneventful.

The writer hopes that by means of this short paper he may have stimulated the interest of others to try this method, since he has found it of great service in dealing with these conditions of the thyroid body.

Since the above paper was written, a number of similar cases have been operated upon with the same happy results.

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