CASE
OF
SPHACELUS OF THE THYROID GLAND,
WITH
RECOVERY OF THE PATIENT.

BY THE LATE
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THE patient was a Frenchman, aged 38, of dark complexion, well nourished, and healthy, though in the habit of drinking freely.

For ten days his neck had been getting stiff, and latterly painful on movement, whilst his throat had become so sore and swollen that he could scarcely swallow. Although feeling very ill he had continued his employment, and had not sought medical advice.

On March 29th, 1873, he consulted my friend Dr. Vintras, who found great swelling of the front of the neck as low as the sternum, and extending laterally beyond the sterno-mastoid muscles. The skin was of a bright red colour, and extremely sensitive to touch, so that examination was difficult; the swelling was dense and

brawny, pitting slightly on pressure about the median line, but no fluctuation could be detected. The pain and thickening prevented movement of the head and depression of the jaw, so that the man was quite unable to open his mouth or to protrude his tongue. He could not speak distinctly, and could swallow fluids only with considerable difficulty. He was evidently suffering intensely, and there was much febrile disturbance; the face was congested, but there was no interference whatever with respiration. As he would not enter the hospital he was ordered to foment and poultice his neck, and to take liquid nourishment with bark and ammonia: morphia was also given.

On April 1st, when he next attended, the skin had given way on the right side of the neck, leaving a small aperture through which dark offensive pus issued. He was somewhat relieved by the discharge, but there was little alteration in the swelling or in his general condition. The right mamma and cellular tissue adjoining were acutely inflamed, and threatened to form matter. The patient was in great pain and could scarcely speak or swallow, but he refused to have an incision made in the neck.

He was seen at home on the 4th, being too ill to leave his bed. The skin in the front of the neck had given way in two or three places, through which sloughs and a quantity of foul pus were escaping; some large pieces of detached cellular membrane were drawn away, but much more could be seen through the openings. The swelling was somewhat less, and he could swallow rather better, but he was very low and suffering much from irritative fever. He had taken scarcely any food during the last three or four days, had slept but little, and was delirious at night.

I saw him on the following day, the 5th, with Dr. Vintras. There was then a large irregular opening in the front of the neck, measuring about three inches transversely by nearly two inches vertically, with ragged

gangrenous edges; through this a large piece of dead tissue was protruding, and there was a very copious discharge of dark-coloured matter; the stench was intolerable, and the man complained bitterly of it. With a pair of dressing forceps a flattened solid mass was readily pulled away, together with several large sloughs; many other pieces had also come away during the night in the discharge. When these had been removed and the pus sponged out the larynx and trachea were seen lying bare at the bottom of the wound, with the sternal muscles deprived of their sheaths, passing up to their attachments, but there was no trace of the thyroid body. The layers of fascia and the connective tissue had completely disappeared, so that a living dissection of the parts in the front of the neck was exposed. The finger was passed up to the hyoid bone, over the laryngeal cartilages, and along the rings of the trachea, until it reached the upper margin of the sternum. On either side the carotid artery could be felt pulsating at the bottom of the wound, but no portion of the thyroid gland remained. The muscles and other structures were covered with red florid granulations. The man could now talk fairly and protrude the tip of his tongue; he swallowed fluids readily, and the movements of the larynx, though less active than usual, were very distinct. The skin of the neck beyond the sterno-mastoids was discoloured, and there was much swelling, but the inflammation was subsiding. He was nearly free from pain, had slept fairly, but was at times delirious; he had taken liquid food largely, the bowels had been well relieved without medicine; pulse 108, with considerable power, and his aspect was good. The swelling about the mammary gland was fast passing away. A large collection of pus which had gravitated over the first piece of the sternum was evacuated by incision.

On examining the pieces of slough the larger one proved to be the thyroid body which had separated *en masse*. The gland was flaccid and shrunken, but its

outline was perfect, the lateral lobes connected by the isthmus were easily recognised, and their subdivision into small irregular lobules could be seen through the thin fibrous capsule.

From this date the patient made a rapid recovery, and at the end of a week the large wound in the neck was nearly healed; free movement of the head was, however, much impeded by the inflammatory thickening which still remained, but this was gradually regained.

The man has since enjoyed good health, and has experienced no discomfort whatever from the loss of the gland and connective tissue; the act of swallowing is perfect, and the larynx can be felt to move as usual beneath the skin. No adhesion has taken place between the cicatrix and the parts beneath, as might have been feared, and the movements of the lower jaw and neck are performed as quickly and readily as before, although they are perhaps slightly limited in extent. From an examination of the patient at the present moment it is difficult to believe that he has been the subject of such an extensive loss of tissue.

Remarks.—This case is of interest in showing that death of the thyroid gland may follow an attack of idiopathic inflammation in a person apparently healthy, and that no inconvenience is suffered by its loss. It also confirms the opinion expressed by those few writers who have touched on the subject, that this organ shows an extreme indisposition to become inflamed.

Dr. Copland says that "inflammation of the thyroid gland never occurs but in scrofulous habits,"¹ and Sir Thomas Watson² endorses this opinion. Little more than a passing mention of inflammation of the thyroid body as a possible contingency is to be found in our standard works; and although a few instances of suppuration in this gland have been recorded, most of them have occurred in cases of bronchocele which had become

¹ 'Dictionary of Practical Medicine,' vol. i, p. 269.

² 'Principles and Practice of Physic,' 4th edit., vol. i, p. 796.

accidentally inflamed.¹ The late Professor Porta, however, in his 'Treatise on Diseases of the Thyroid Gland,'² devotes a chapter to thyroiditis, wherein he states that inflammation may commence in the cellular envelope or in the parenchyma of the gland; that it may be limited to one side, or involve the whole organ in acute inflammation; and that when inflamed the gland suddenly increases in size, so that it will become very large in a day or even in an hour. He mentions sphacelus as a very rare and fatal result, of which he has scarcely seen an example.

Lebert³ in his valuable work on the diseases of this gland bases the section on thyroiditis upon 50 cases, of which 9 occurred in his own practice. Of these 13, or 26 per cent., proved fatal, and in 32 of them, which resulted in the formation of matter, 11, or 34·37 per cent., died. Whilst admitting that goitre is one of the predisposing causes, he states that idiopathic inflammation most frequently occurs in a healthy gland. He alludes to seven examples of mortification of the gland which he has collected from various German authors, and gives the details of two of them which very closely resemble those met with in the subject of this communication.

In these very rare instances of complete necrosis Lebert is of opinion that the inflammation does not take place in the gland itself, but in the connective tissue supporting the thyroid arteries, which, by causing thrombus in the vessels, leads to death of the entire organ. The shrunken, but otherwise unchanged, condition of the gland in the present case and the extensive sloughing of the cellular membrane afford strong testimony to the accuracy of this surmise.

All writers speak of dyspnœa and dysphagia, occa-

¹ Allan Burns, 'Surgical Anatomy of the Head and Neck,' p. 215; 'Holmes's System of Surgery,' vol. iv, p. 706, 1st edit.; 'Gross's System of Surgery,' vol. ii, p. 390, 3rd edit.; 'Chelius's System of Surgery,' by South, vol. ii, p. 653.

² 'Delle Malattie e delle Operazioni della Ghiandola Tiroidea,' Milan, 1849.

³ 'Die Krankheiten der Schilddrüse und ihre Behandlung,' Breslau, 1862.

sioned by pressure of the swollen gland or of matter upon the air-passages and œsophagus, as the most constant and urgent symptoms of acute thyroiditis; and of the 13 fatal cases referred to by Lebert death was caused in 5 by asphyxia from compression, and in 4 by bursting of the abscess into the larynx or trachea. In the case now before us, however, there was no difficulty of breathing, although the face was much congested from venous obstruction; and although the dysphagia was very great it appeared to result from the interference with the movements of deglutition dependent upon inflammatory exudation into the tissues, rather than from pressure upon the œsophagus.

Of the 7 cases of mortification mentioned by Lebert 4 recovered, and in these, as in the present example, no after inconvenience of any kind was observed although the gland was completely destroyed.

The extirpation of this body by natural means constitutes a very interesting physiological experiment, and the absence of any appreciable effect sustained by its loss is in full accord with the experimental excision of this gland which has been occasionally practised upon animals, and with its more or less complete removal by operation in the human subject.

That no apparent disturbance of function should attend the loss of the thyroid body would lead to the inference that in the adult it has become an effete organ, of little, if indeed of any, service in the economy, whatever its value may be in early life during the period of active development; and perhaps of some interest in connection with this latter part of the subject are the two cases of congenital absence of the gland in children, recorded by Mr. Curling in the 'Transactions' of this Society,¹ in both of whom "defective cerebral development" was combined with arrest of growth.

¹ 'Med. Chir. Trans.,' vol. xxxiii, p. 303.