

ther observation is then required, and special attention should be directed to the tumour on chewing, speaking, or on partaking of salty or acid food, for the swelling may increase in size with the additional secretion of saliva. In doubtful cases an exploratory puncture, made from within the mouth, should settle the matter.

The following case was of interest: A man, about forty years of age, came to the clinic complaining of a flattened, rounded tumour, the size of a half walnut, situated in the parotid region. The tumour was sharply circumscribed and fluctuating. The skin over it was normal. The patient was healthy; therefore no cold abscess. Consequently, a sebaceous cyst was the hasty diagnosis of the students. I, however, showed that the tumour was immovably fixed, and that the skin did not show the vascular network which is invariably present in sebaceous cysts of this size occurring on the face. I diagnosed a salivary cyst, and puncture showed salivary secretion.

Not infrequently *salivary fistulae* occur in the parotid region. The location of the fistula will usually determine whether the tract leads down to the duct or to a lobe of the gland. If its site does not definitely settle this point, the amount of saliva discharged will do so. A *fistula of the duct* alone can discharge *large* quantities of saliva after eating, because it receives the secretion of the whole gland.

Solid *Tumours* of the parotid often offer insurmountable difficulties to diagnosis. Naturally, only those tumours which extend deeply into the parotid fossa, and are not readily movable, are here referred to. A careful history is of the greatest assistance. A tumour which begins as a small, protruding, movable nodule, and grows fixed only after penetrating into the deeper parts, did not originate from the parotid gland. A tumour which at first forms a flat and diffuse elevation in the parotid region, but later develops into prominent knobs, must have started from the parotid. This really is all that can be given as a general characteristic.

CHAPTER X

DYSPHAGIA—STENOSIS OF THE ESOPHAGUS

A PHYSICIAN of Amsterdam (van Geuns) more than one hundred years ago divided dysphagia into two varieties. He distinguished between difficulty of deglutition and difficulty of transglutition. In the first, the patient can begin the act of swallowing, but the bolus sticks fast in the esophagus; in the second, the solid or fluid meets with hindrance somewhere between the lips and the gullet. The bolus can not reach the esophagus, but, if it reaches this, it can enter the stomach without further hindrance. This division is of practical value, for the diseases which produce difficulty in the chewing, formation, and transportation of the bolus differ from those which are marked by an obstacle situated in the esophagus itself. In the former, paralysis is usually the cause, as chewing and turning the bolus, and then transporting it to the esophagus, is chiefly a muscular act. The latter, as a rule, is caused by strictures; for Mikulicz, by means of esophagoscopy, practised from above, and Maydl, by endoscopy through a gastric fistula, from below, showed that the normal esophagus is a wide-open and gaping tube into which the object to be swallowed need only be introduced. In order to appreciate the value of the symptoms, it is sufficient to be cognizant of these facts. Swallowing presupposes not

only patency of the whole passage, from the lips to the cardia, but also unimpaired muscular action. Therefore the main inquiry will be directed to find out whether a stricture is present or not. Inspection of the mouth and pharynx, examination of the esophagus by bougies, will always enable us to detect a stricture. It will become merely a question of detail and of technic. If stricture can be excluded, either muscular paresis or some obstruction of the upper passages, which are open to inspection, is the cause of the trouble.

Before going further, it is well to emphasize the fact that a stricture of the lower end of the esophagus may exist, and that the physicians may regard it as a case of gastric trouble. Such a barely conceivable error results from omitting the examination by bougies.

Trousseau mentions the case of a woman who was treated for many years for supposed gastric troubles, in consequence of which she had greatly emaciated. By examination of the esophagus with bougies a stricture was detected, and the patient's health restored in the course of a few weeks.

Steiger recounts an analogous case. A gentleman suffered from frequent vomiting of food and mucus, retching, and what was supposed to be gastralgia. The patient's age, emaciation, and cachexia led to the diagnosis of cancer of the stomach, as he always asserted that his ability to swallow was unimpaired. The bougie, however, detected a considerable narrowing of the esophagus at the cardia, which later proved carcinomatous.

Examination of the esophagus by the bougie is the most important diagnostic aid, but as it is not always submitted to by the patient, those signs which point to esophageal disease had best be mentioned. If auscultation of the esophagus were unimpeachable, it might be of value in making a provisional diagnosis.

Except in such unusual cases as those mentioned above, it is, as a rule, possible to make the diagnosis of stricture from the facts gathered from the patient. A positive cause may be known: as, for instance, the swallowing and impaction of a foreign body, or the swallowing of some caustic substance. In such cases the diagnosis is confirmed by seeing the patient regurgitate food, or by his locating a definite spot in the neck at which the food remains fast. The bougie is then used at once, as in foreign bodies, or it will have to be used later, as in strictures; never in cases of burns by caustics, until some time has elapsed, as the injured spots should not be sounded before cicatrization has taken place. This stage can be recognised by the fact that bloody pus is no longer vomited or regurgitated.

Let us take a case in which dysphagia has arisen without known cause, and where, consequently, immediate examination by bougie is unnecessary. The patient tells us that he has noticed for some time that solid food stuck fast in his esophagus. As a rule, he will state at what site the arrest occurs, and will add that a swallow of liquid softens and carries down the food. When the patient is no longer able to do this, he is reduced to swallowing liquids, and these only in small quantities. Half a tumbler of water is immediately thrown up with great violence, but a spoonful is well borne. If the patient has not attempted to keep up his strength by taking very concentrated food, such as milk and eggs, he is emaciated when first seen. If the individual is of advanced age, if examination of neck, thorax, and abdomen shows no tumour, we are usually correct in diagnosing CARCINOMA OF THE ESOPHAGUS. This assumption is strengthened by the

presence of other symptoms, such as several hard, enlarged, and painless lymphatic glands in the supra-clavicular region. Occurrence of spontaneous pain at the seat of stricture, occasional traces of blood in the regurgitated food, and, at a later stage, fetid odour from the mouth, all make the diagnosis more probable. If carcinomatous cells are found in the vomitus the diagnosis is assured. Carcinoma is by no means excluded if the patient states that he has temporary periods of improvement, for parts of the growth may break down, be cast off, and the passage become free. In a short time renewed growth again obstructs the lumen, and this process may be repeated several times. On the whole, however, the disability continually increases with the usual rapidity of carcinomatous growths; therefore the duration does not exceed more than a few months. I have never, as yet, been deceived in the diagnosis of carcinoma by thus interpreting the symptoms.

It must be emphasized that only in the rarest instances can carcinoma of the esophagus be made plainly evident. Swelling of the glands is rare; fragments of the growth, available for microscopical examination, are never encountered. And yet the diagnosis is made with a probability bordering on certainty. Having heard the patient's history, and having demonstrated a stricture by means of bougies, we reason as follows: The patient is of the age at which carcinoma of the esophagus commonly occurs. The stricture has no known cause—in other words, it is spontaneous. Its course has been so rapidly progressive that carcinoma alone could account for it; besides, the patient gives no evidence of other disease. Of course, one other com-

plaint must be ruled out: this is compression of the esophagus by a tumour.

Carcinoma of the esophagus can develop at various parts of the tube. It is most often found at the lower end; or, more accurately, it is found oftenest at any part of the esophagus which is below the upper border of the thorax.

If the obstacle is situated at the level of the cricoid cartilage, we must bear in mind those rare cases of enlargement of the lamina of the cricoid which are sometimes met with. It has been noticed they are attended by very great dysphagia.

Spontaneous stricture of the esophagus may be due to syphilis; but, compared with carcinoma, this occurrence is extremely uncommon.

The causes of stricture are evident if a *tumour of the neck* presses on the esophagus. It is well to remember that goitres in women may *periodically* cause difficulty of deglutition of a minor degree when the tumour undergoes swelling and congestion at the menstrual period.

Pressure stenosis of the esophagus, due to *tumours of the thorax*, is much more difficult to diagnose. Here the methods of diagnosis at the command of internal medicine must be resorted to.

The opposite of stricture is dilatation; sometimes this follows and is the result of stricture. That portion of the tube situated above the stenosis dilates to a moderate degree throughout its whole length.

In addition to this condition, there is a primary dilatation known as *Ectasis*. The esophagus dilates, and becomes a wide, tortuous tube, with an accompanying thickening or thinning of its walls bearing a faint resemblance to the intestine. This is followed by accumulation of the ingesta in the tube, and by the decomposition

of the retained masses. The food is vomited; eructation of foul-smelling gases annoy the patient, and an unpleasant feeling of pressure in the chest may follow each meal. The etiology of such conditions is not clearly understood. It appears that most cases are due to paralysis. In former days surgeons spoke of this condition as *Atonia esophagi*. One of the best-known medical writers of the sixteenth century (Felix Platter) suffered from this disease for several years. Willis mentions one case in which a man continued to live for sixteen years in this condition by shoving his food down the esophagus with a small sponge attached to a whale-bone handle. The disease, if at all marked, can be recognised by means of the bougie. A specimen preserved in the museum at Vienna will admit a man's arm. In such an esophagus the sound can make wide excursions. The older authors describe, in connection with this, *atonia esophagi—gula imbecillitas* was mentioned by Galen—an extremely anæmic condition of the pharyngeal mucous membrane. Such findings, if a trauma had preceded—a concussion of the thorax, for instance—would support the assumption of a *paralytic origin* of the trouble.

Circumscribed local dilatations of the esophagus are known as DIVERTICULA. The dilatation may be cylindrical, spindle-shaped, or saclike in form. The last variety, in particular (in which the diverticulum has grown to be a pouch placed next to the esophagus and opening into it), is of the greatest surgical interest. It may be due to some ulceration, or to the traction of cicatrizing lymphatic glands situated in the neighbourhood of the esophagus. In addition, there are diverticula which are the remains of foetal structures. Esophageal

diverticula, placed at the apex of the bifurcation of the trachea, are representatives of this class. When the dilatation has reached a certain size it causes disability. The food passes partly into the stomach, partly into the diverticulum, which may be situated in the neck or near the stomach. With the increased fulness of the pouch the patient experiences distinct sensations at the site of the diverticulum. In the neck a visible tumour appears, which to the palpating finger imparts the same peculiar sensation experienced on examining the crop of a bird. In this given case the patient can empty the pouch by squeezing or kneading it. In other cases, the patient can entirely or partially occlude the opening of the diverticulum by holding the neck or chest in certain positions, the food then reaching the stomach unhindered. The bougie meets with the same fate as the food, sometimes reaching the stomach without trouble, at other times becoming engaged in the pouch, and abruptly arrested. In some of these patients a peculiar phenomenon can be observed: the food returns to the mouth shortly after a meal, without vomiting or retching, just as it does in the ruminants. A well-known medical scientist, who was also a shining light in Parliament, called an opposing political party ruminants. He escaped being called to order only by stating that *cud-chewing* was a *human infirmity*. We might as well state here that cud-chewing can occur independent of a diverticulum.

Weinlechen makes the important statement that the opening of the pouch gradually changes its position during its development. If the patient is under observation for a long time and is frequently examined, it will be noticed that the place at which the bougie meets with obstruction by degrees assumes a different level.