CLINICAL NOTES.

CASE OF MALIGNANT DISEASE OF THE ŒSOPHAGUS,
WITH PERFORATIONS OF THE TRACHEA AND
BRONCHUS.—DEATH.

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M. C., male, aged forty-four years, commercial traveller, applied at the Eye, Ear, and Throat Infirmary on April 1, 1890. He complained of a difficulty in swallowing, at first slight and intermittent in character, but a few days previously this had suddenly become more intense and persistent. Patient was of alcoholic habits. He had had no previous important illness.

His present complaint dated from Christmas, 1889, when slight difficulty in breathing and swallowing was present. This occasionally passed off, and he could then breathe and swallow without difficulty, until a few days before application at the infirmary, when, as already stated, the difficulty became more persistent, especially on deglutition. On March 17 he had a severe attack of hæmorrhage, which was controlled by the use of the tannic and gallic acid mixture, T. H. P. (It is of interest to note here that the hæmorrhage never recurred).

On admission he was somewhat emaciated. The percussion note seemed slightly impaired at the right pulmonary apex, and the breath-sounds seemed hardly so clear as over the left. Some hard masses were felt, deeply situated along the right side of the trachea, and the right lobe of the thyroid was enlarged. The *vox anserina* was present. On laryngoscopic examination the right vocal cord was found completely paralyzed in the cadaveric position. Fluids required from ten to twelve seconds to enter the stomach from the time of swallowing, and auscultation of the gullet gave distinct indications of some obstruction in its upper third. As passage of a bougie caused considerable irritation, the patient was put under chloroform, when it was found that the instrument was arrested about six and a half inches from the front incisor teeth. Aneurismal signs were absent.

The patient lingered on until May 9, when he died. During this period the principal clinical points were, increasing difficulty in swallowing, impossibility of passing stomach tube on account of the violent irritation and retching thereby induced, and the feeding of the patient *per rectum*.

An inspection of the gullet and windpipe was made on May 10. Along the left side of the trachea, from the inferior border of lobe of thyroid, was a chain of hard masses, each being rather larger than a bean, with several smaller masses interspersed. These extended beyond the bifurcation, but did not apparently press on the trachea or bronchus. On the right side there were similar masses, but twice as large, extending

downwards in a similar way, and pressing slightly upon the right bronchus. The thyroid lobes were enlarged, but not diseased.

On laying open the gullet there was found on the posterior wall, corresponding to the lower third of the trachea, an ulcer, about two and a quarter inches long, with several honeycomb openings, the largest of which might be covered by a threepenny coin, leading into the deeper peri-œsophageal tissues. On the anterior wall was a corresponding ulcer, leading by a conical opening into a pit, at the bottom of which was an opening into the left bronchus, large enough to admit a grain of rice. For an inch and a half upward the gullet was thoroughly healthy, then another ulceration was reached, extending upwards for about four inches, with a breadth of about three-quarters of an inch. The tracheal cartilages were there entirely eroded, and free communication existed between the food and air passages.

The recurrent laryngeal nerves were pressed upon by the above described masses. This pressure was most marked on the right side. Microscopical examination indicated carcinoma.

Remarks.—The course of this case was unusually rapid, the patient dying in about four and a half months from the onset of symptoms. The signs on gastric auscultation, and on passage of the œsophageal tube, may be briefly commented on.

Regarding the former, attention may be directed to some valuable observations on the subject by Professor Ogston, Aberdeen (*On the Diagnosis of Stricture of the Œsophagus*, "Manchester Med. Chronicle," Jan., 1887). He regarded the degree of rapidity of the passage of the food along the gullet as being a very valuable sign of stricture of that tube. A healthy person requires four seconds for passage of food from the mouth to the stomach. The rising of the pomum Adami tells that it has passed the pharynx into the œsophagus, and placing the ear three inches below the angle of the left scapula, a distinct amphoric or gurgling sound tells that food has entered the stomach. With watch in one hand, finger on the pomum Adami, and directing the patient to hold fluid in the mouth till told to swallow, the time of entrance into the stomach can easily be calculated. In case of stricture, the food takes fourteen or sixteen seconds instead of four to traverse the œsophagus. Ogston believes this to be very useful and reliable in most cases.

In the case now reported, the interval of ten seconds occupied by the food to pass into the stomach indicated that some degree of constriction existed, though not to the extent sometimes met with in malignant disease.

In regard to the passage of œsophageal bougies and tubes, which, to admit of correct conclusions being arrived at, ought always to be done under an anæsthetic, the experiment of Maurice Richardson (*The Possibility of Operations on the Œsophagus through the Stomach as shown by Dissections*—Transactions of the Ninth International Medical Congress, 1887) are very *apropos*. This observer found that there is no constant ratio between the height of the individual and the œsophageal measurements. When the head is thrown back in the position for passing

the probang, he found that the average distances from the front incisor teeth were, to the opening in the diaphragm, fourteen and a half inches, and to the cricoid cartilage seven inches. Here, the arrestment of the tube about six and a half inches from the front incisor teeth gave a correct clue to the locality of the disease.

It may be incidentally remarked that while Richardson's experiments gave fourteen and a half inches as the average, ten and a half inches as the minimum, and seventeen inches as the maximum distance from the front incisor teeth to the opening in the diaphragm, a case of cancer of the œsophagus was recently brought before the Pathological Society of London ("British Medical Journal," April 5, 1890), in which it was stated that "rubber quarter-inch tubing, to the length of twenty-two and a half inches, was passed down the œsophagus, and left in until next day, when "it was removed, as it became blocked." On another occasion, a catheter was passed twenty inches from the teeth. It is curious to note that no comment was made upon this filling of the stomach with rubber tubing and curled catheter, unnecessary proceedings under any circumstances, but more especially so with the disease located, as was the case, opposite the cricoid cartilage.

The treatment in the present case calls for little comment. The patient declined surgical interference, and during the last week or two of his life was mainly dependent upon rectal feeding. There was no indication during life of the trachea or bronchus having been eroded, and consequently these conditions were not diagnosed.

ANNOTATIONS.

A VERY interesting subject was chosen for the Morrison Lectures of 1890 by Dr. Clouston. These are now appearing in the "Edinburgh Medical Journal," the January, 1891, number of which contains the first instalment. The life history of man includes not only the two periods of growth and development, but the two physiological periods of absolutely non-reproductive and gradually developing reproductive capacity, the period before puberty, and that from puberty during adolescence up to maturity. "The periods of brain growth, and that of non-reproduction, do not absolutely correspond, but it may be held as a great law that when "active cell growth ceases in the cortex, then only does reproductive "function begin." . . . "Certain mental disturbances in the functions of "the brain are intimately associated, hereditarily and functionally, with "certain motor, sensory and trophic neurosis, incidental to the period of "development." Dr. Clouston believes that if our knowledge of heredity and physiology were sufficiently advanced, we should be able to fit into a comprehensive scheme and show the true relationship "of the "acephalous fœtus, the hare-lipped, the cleft-palated, and the open-spined "child, the congenital imbecile, the deaf and dumb, the cases of infantile