CASE OF
BRONCHIAL CALCULUS,

WITH OBSERVATIONS ON DISEASE OF THE
BRONCHIAL GLANDS.

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READ JANUARY 10TH, 1843.

MR. JOB ALDRIDGE, quarter-master, 8th (King's) Regiment, quartered in the Royal Barracks, Dublin, ætat. 48, plethoric and of nervous temperament, began, about the 7th September 1842, to complain of pain in the right side, affecting, to a trifling extent, the freedom of respiration.

Pressure over the liver caused great uneasiness. The pulse was natural, tongue furred, bowels constipated, and heat of surface moderate.

He states, that for some time past he has been annoyed, particularly in the morning, with a most disagreeable taste, resembling fried onions.

Suspecting the biliary secretion to be in a vitiated state, and the organ somewhat gorged, calomel, with cathartic extract, was given, followed by infusion of senna and salts. Several dark, offensive stools succeeded ; the pain and difficulty of breath-

ing, however, were rather increased than otherwise. The pulse was fuller, and resisting—sixteen ounces of blood, taken from the arm, produced some relief. The breathing became more free. This treatment was directed, not only with the view of improving the secretions of the liver, but of relieving any congested state of that viscus.

The alteration for the better was of short duration. The pain of liver, the difficult and painful respiration, returned with increased violence, while paroxysms of cough followed each other in rapid succession. Pulse 98, of large volume, but readily yielding to pressure; a thick brown coating on the tongue; heat of surface moderate; bowels acting freely; motions foetid, of a dark colour; urine plentiful and light. He continued to refer the pain to the liver. Pressing that organ against the diaphragm, caused more acute pain than pressure exercised in any other direction.

The foetor of breath increased. This, though so distressing to him, is not perceptible by myself. The horizontal posture is now attended by a sense of suffocation.

Blood was again drawn from the arm, and as the difficulty of breathing was thereby but little relieved, 24 leeches were applied over the right hypochondrium. The quantity of blood lost by this mode was so trifling, that a further abstraction of blood by cupping was thought advisable. He could now bear much greater pressure, but the cough and dyspnoea remained unaltered.

Calomel, squills and the tartrate of antimony were given in small but repeated doses, and a blister was placed over the region of the liver.

The cough and dyspnœa continued increasing in severity, and the only position in which he could remain with anything like ease, was leaning forwards, holding both knees.

In consequence of the alarming state of the patient, I requested Dr. Peile, deputy inspector-general, to see him, who, from the nature of the symptoms, suspected that effusion had taken place, causing, by the gravitation of the fluid, that distressing sense of suffocation which invariably occurred in lying down.

Percussion elicited no morbid sound, and auscultation proved the lungs on both sides to be in a healthy condition, as also the heart.

The patient on this occasion stated, that about three weeks prior to his illness he had partaken of a pear, and while part of it was passing down the œsophagus, he experienced a sense of soreness, and thought it remained in his chest.

He pointed to a spot, a short distance below the clavicle, and a little to the left of the sternum. He added, that from that day up to the present, whatever he has swallowed, liquid or solid, appears to him not to pass beyond that spot.

It was soon after the above event that he first noticed the fœtor of his breath, which he represents, at times, as most intolerable.

The active treatment which had been pursued

failed in alleviating the symptoms. The cough not only became more frequent, but the paroxysms of longer duration; the dyspnœa, on resuming the recumbent posture, more alarming, added to which, the patient now complained, at intervals, of a sense of syncope.

The system was, at this time, under the influence of mercury. At this period of the case, (October 8th,) Dr. Wm. Stokes was called in, and this gentleman, after a most careful examination of the chest, pronounced the lungs and heart to be healthy.

He considered the disease as depending chiefly upon nervous and spasmodic irritation of the respiratory organs, and advised expectorants and sedatives. Up to this period the cough had been hard and almost unattended by expectoration, which, however, became shortly afterwards abundant, and consisted chiefly of glairy viscid mucus.

Soon after the first interview with Dr. Stokes, the breathing became stridulous, the cough laryngeal, succeeding, in paroxysms, each full inspiration. The patient was unable to remain, even for the shortest time, in the horizontal position, without a most distressing sense of choking.

There was the same, or even increased foetor of the breath. Notwithstanding these urgent symptoms, there was but little acceleration in the pulse or alteration in the temperature of the body. The urine was copious and natural, and the bowels free. Between the thyroid and cricoid cartilages the air passed as if over a roughened surface. The sound

on percussion over the larynx was remarkably dull. The voice at intervals was somewhat hoarse. No indication of disease existed in the lungs, or morbid appearances on inspecting the pharynx. On the 11th October it was suspected that laryngitis had set in. The treatment now consisted in the external application of leeches and extract of belladonna, also calomel, tartar emetic and sedatives taken internally.

No relief followed. On the contrary, the symptoms augmented in violence. Having passed a most distressing night, he was seized on the morning of the 18th October with a severe fit of coughing, which was at length subdued by help of an anodyne mixture; soon after taking which, he fell into a disturbed sleep.

At this period I was summoned to see the patient.

I found the stridulous breathing replaced by mucous *râle*; a total absence of vesicular expansion in the right side, and so obscured in the left, as scarcely to be heard. He was comatose, and in about half an hour after my arrival, after a deep inspiration, he suddenly expired.

Six weeks had elapsed since the commencement of the illness.

Post-mortem Examination thirty hours after death.—Little or no rigidity of the limbs; the muscles well developed and adipose tissue very abundant.

A small inguinal hernia of the left side, which first became apparent about four years ago.

The removal of the sternum was difficult, in consequence of the ossification of the cartilages of the ribs. The right lung was a little gorged with blood and rather dark-coloured, but it was free from adhesions, and in other respects perfectly healthy. On raising it and dividing its attachments, the knife suddenly entered a *cavity*, of the size of a pullet's egg, from which a most offensive odour was emitted. This cavity was formed by an abscess in a mass of enlarged bronchial glands, situated at the bifurcation of the trachea. It opened into the right bronchus, ulceration having destroyed a large portion of that tube. The inferior margin of the ulcerated opening was thickened and elevated: on the other side, the abscess communicated with the left bronchus, by an aperture of about half an inch in diameter, having inverted and thickened edges. Posteriorly, the abscess had made its way into the œsophagus by ulceration. The opening into that canal was capable of admitting a large-sized bougie. The abscess contained a quantity of calcareous matter, some very hard, some of a soft consistence. The whole, when first examined, was of a dark melanotic aspect. A triangular portion of the hard calculous matter had firmly wedged itself into the aperture communicating with the right bronchus.

The mucous membrane in both tubes (above the ulceration) was marked by a deep blush, which extended nearly as high as the thyroid cartilage. A small ulcer was discovered towards the inner edge

of the descending cornua of the thyroid cartilage on the right side.

The left lung was in a state of congestion like the right, but otherwise healthy. The heart was small but normal.

The liver was large and gorged with dark blood, but no traces of inflammation in it were discoverable.

The other portions of the abdominal viscera were not examined.

A portion of the calcareous mass taken out of the right bronchus was analysed by Dr. Burton, and found to consist of phosphate of lime.*

The foregoing case offers much matter for reflection. The real seat of disease was certainly not known, nor even suspected, during life, but, nevertheless, some points had been diagnosticated, which dissection fully verified. Auscultation had pointed out the healthy condition of the heart and of the lungs.

Percussion of the chest had dispelled the apprehension, at one period entertained, of effusion into the cavity of the pleura.

Laryngitis had been very clearly distinguished, as soon as the stridulous breathing and the hoarseness were added to the spasmodic cough.

Deep-seated dysphagia certainly did exist, and ought perhaps to have attracted more attention, but

* A preparation of the diseased mass was made, which is deposited in the Museum of the Medical Department of the Army at Chatham.

the peculiar nature and extreme rarity of this case, may well plead in extenuation of the diagnostic error committed.

It is scarcely possible to conceive a case wherein the appearances on dissection more satisfactorily explain the whole course of the phenomena during life. It is evident that the moment the foetus was noticed by the patient the abscess had opened into one, or probably into both, bronchial tubes. The sense of suffocation attending the recumbent position no doubt arose from the pressure of the large tumour upon the trachea, and probably by a portion of the calcareous mass slipping occasionally into the right bronchus, the aperture of which was so much larger than that of the left bronchial tube.

The sudden extinction of life may be accounted for by the calculus found wedged in the right bronchus, added to the partial obliteration of the left.

Spasmodic closure of the glottis was probably the last in the series of phenomena.

The observations of authors on the diseases of the bronchial glands, and of the cellular tissue in which they are imbedded, are few, and not characterized by great accuracy. Dr. Baillie's "*Morbid Anatomy*" is silent on this portion of pathology.

Laennec (chap. 9) remarks, that "inflammation of the bronchial glands is very little known, and appears very rare." He adds, that "Cretaceous matter and tubercle are the two kinds of accidental productions observed in these glands. The

former is sometimes found quite dry and hard, but more commonly so soft that it may be forced out by pressure." "When cretaceous matter is formed, it is rare," he says, "to find the whole structure of the gland involved. It occupies the centre of the gland." He has seldom met with abscess in the bronchial glands, nor has he ever seen the disease in them assume the character of bone. He further remarks, that "tuberculous disease of this structure is frequently found without accompanying tubercles of the lungs, or marks of any severe affection of that organ."

Dr. Stokes remarks, (page 303,) that "disease of the bronchial glandular structure has not obtained separate investigation. Yet from recorded cases, we may conclude that these glands, when hypertrophied or otherwise diseased, seldom produce any striking symptoms."

Dr. Stokes proceeds to observe, that "according to Andral, tumours of the bronchial glands frequently cause tracheal and bronchial compression. I have never myself," he adds, "met with any instance of stridulous breathing, or even bronchial compression, produced by this disease."

Berton, who, according to Dr. Stokes, is the latest writer on the subject, dwells strongly on the fact that the bronchial glands may be greatly hypertrophied, without causing compression of the blood-vessels and air-tubes.

A case is recorded by Andral, where an enormous

mass of melanosis compressed the right bronchus so as to diminish its diameter by one half. There was here no stridulous breathing, the signs being a feeble respiration in one lung, with intense puerility in the other.

My own reading has not furnished me with any case resembling the present.

At all events, there can be no question, that such an occurrence as calculus of the bronchial glands finding its way into the bronchus by ulceration, and suddenly destroying life, is extremely rare.

The case is interesting, too, on another account.

Disease of the bronchial glands, was in this instance, uncomplicated with disease either of the lungs, or of any other important viscus. The character of the symptoms, therefore, attending this singular variety of thoracic disease is here very unequivocally manifested.

The diagnosis of bronchial disease will probably be always attended with difficulties. Stethoscopic investigations may, as in the case now recorded, afford indirectly much assistance, but our surest and most efficient guide will be found in careful reflection on the nature and succession of the symptoms.