HISTORY AND DISSECTION
OF
A FATAL CASE
OF
CYNANCHE LARYNGEA.

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THE following recital of a case of cynanche laryngea, whose fatal event has lately deprived the world of an eminent character, is transcribed from notes taken daily during my personal attendance upon him, in conjunction with another physician, and two surgeons.

X. Y. aged 63, of spare, though muscular habit, and somewhat delicate health, was attacked with apparently slight catarrh and sore throat, in consequence of a hasty and fatiguing journey. On Tuesday, May the 4th, 1813, he consulted an eminent physician of this city, who advised purgative and sudorific remedies, under which treatment the symptoms appeared wholly to subside.

Having imprudently ridden out, and exposed himself to a cold east wind, the catarrhal affection recurred on Friday the 7th, when he was directed to be bled to the amount of 16 ounces, to take a pill of calomel and cathartic extract, and a draught with nitre. He rested perfectly well this night, and appeared nearly in his usual health on the following morning. His tongue was clean, his pulse between 70 and 80 strokes in the minute; and he took an airing in his carriage in the course of the day. On the following morning (Monday) he again manifested catarrhal symptoms, with sore throat, and hoarseness. He was now directed to take James's powder to some extent, which induced profuse perspiration, with great relief of all the urgent symptoms. Before the sweating had subsided, on Tuesday morning, he injudiciously rose from his bed, and occupied himself during the day, by dictating aloud to some attornies in his chamber. In the evening, his respiration became much impeded, and his voice extremely hoarse; which alarmed him by the resemblance of the present attack to one which he had experienced in London eleven years before. On that occasion he was bled copiously and repeatedly, and narrowly preserved his life. The patient himself, and several of his friends, affirmed the disorder to be the same as the present, and confined to the upper parts of the windpipe. It may be proper to observe, that his father suffered a severe attack of this kind many years ago.

On Wednesday morning, I saw him for the first time, in conjunction with another physician and a surgeon. His countenance was then pale and anxious; his eyes protruding; his tongue foul and much swelled; his respiration slow and laborious, with a shrill or stridulous sound, as of air forcibly passing through a narrow orifice; and his voice indistinctly audible, in the tone of a hoarse whisper. He had a perpetual inclination to expectorate; but all his efforts to this purpose were fruitless, which added much to his distress, by the continual apprehension of suffocation. He was perfectly unable to swallow any substance, whether fluid or solid, as the smallest portions of either were instantly rejected with violent coughing. The visible internal fauces were of natural appearance and pale colour. He informed us that he had experienced some shooting pains about the larynx, which were now entirely subsided. The epiglottis was swollen or distended, and somewhat erect; which accounted for the coughing and sense of suffocation on attempting to swallow anything, as this organ had ceased to act as a valve upon the larynx. His pulse was full, throbbing, and very frequent.

Twenty ounces of blood were withdrawn from his arm by a large orifice, which afforded some immediate relief to his respiration, and his general feelings of distress. He now thought he was able to swallow, but on attempting it with a tea-

spoonful of water, the fluid was rejected with a fit of coughing, or rather of suffocation, which nearly extinguished life.

Sixteen leeches were now applied to his throat, and two purgative enemata were administered, which brought away no *fæces*.

In the afternoon, his urgent symptoms appearing to be stationary, twelve ounces of blood were taken from his arm, and a dozen leeches applied to his throat.

At 9 o'clock p. m. his pulse was softer and less frequent; but his tongue was still swelled and dry, his breathing not amended, and the stridulous sound unabated.—Bronchotomy was now determined upon; and the operation was performed without delay, by a vertical division of the integuments covering the interval between the cricoid and thyroid cartilages; the tracheal membrane was pierced laterally, and a canula was inserted, whose diameter was somewhat less than half an inch. The loss of blood by this operation might be about six ounces; some part of which escaped into the trachea, and was returned through the aperture with much gurgling noise. He likewise expectorated a small quantity of mucus. In about half an hour he breathed with perfect facility, and fully inflated his lungs, which was hailed as a favourable circumstance. He slept at intervals dur-

ing the night, for the space of three hours ; and towards the morning, he swallowed four desert spoonfuls of milk, with some caution and address.

At half past ten o'clock A. M. (Thursday) his pulse was frequent but tranquil, his animal spirits lively, and he wrote much with a pencil upon paper, concerning various matters. He spoke with effort, and the tone of his voice was still that of a hoarse whisper. Two or three purgative injections brought away a trifling quantity of fæcal matter. At noon, he made a fruitless attempt to swallow. A nutritive injection of milk, and another of broth, were administered in the course of the afternoon and evening. Eight leeches also were applied to his throat. During the night, his pulse became more frequent, and he continued, though restless, to lie on his back only when recumbent. By great, and repeated efforts, he expectorated a piece of hardened mucus besmeared with blood. About two o'clock in the morning, his breathing became greatly embarrassed, his extremities grew cold, and he appeared to be on the point of death. Twelve ounces of blood were withdrawn from his arm ; the canula was cleansed and replaced (an operation which was always repeated at short intervals), when, to the agreeable surprise of his attendants, his respiration became more easy, the warmth returned to his extremities, his pulse revived, and shortly afterwards his animal spirits and cheerfulness returned. He swallowed a

pint of liquid nourishment, at intervals, with tolerable facility; and he repeatedly expectorated pieces of hardened mucus, besmeared with blood.

At 10 o'clock A. M. on this day (Friday) he appeared refreshed and amended in all respects. Purgative and nutritive enemata were administered during the day alternately. He swallowed also small portions of broth and jelly repeatedly. In the evening, his pulse was soft and tranquil, though still frequent. His supine posture was, for the first time, changed to lying on his right side. His powers of deglutition were considerably improved, and the tone of his voice greatly amended. He had passed fæces and urine. His tongue, which had hitherto been swollen and hard, was now reduced to little more than the natural size, and was soft and moist; his countenance also was much improved; but he continued to breathe only through the canula.—He passed the early part of this night tranquilly, until 2 or 3 o'clock in the morning, when his fever increased (similarly to the exacerbation of the preceding night), his breathing became laborious, and he evinced much irritability and despondency of mind. This febrile paroxysm continued for several hours.

At noon on Saturday, his symptoms again wore a favourable appearance. His countenance was natural; his pulse, though frequent, was regular and

firm; his tongue was reduced to its natural size and appearance; his powers of deglutition were perfectly restored; and the tone of his voice approached to a low key of the natural sound. He had passed copious evacuations, by a solution of Rochelle-salt in chicken-broth. The canula had been removed from the trachea for some hours; and as he breathed with perfect facility through the natural organs, it was not afterwards inserted into the aperture.

The evening, and early part of this night, were passed with tranquillity and some sleep. About sunrise, however, he began to shew much impatience, irritability and alarm. Yet he swallowed, at 6 o'clock A. M. on Sunday morning, six or seven spoonfuls of oatmeal porridge, with milk, at his own particular request. About two hours afterwards his mind appeared to be much disturbed; his pulse became more frequent and feeble; delirium, and at length stupor, supervened, and he sunk rapidly until 6 o'clock in the afternoon, when he died without a struggle.

At 3 o'clock on the following day, one of the surgeons who had been in attendance, (and who is a skilful professor of anatomy in this city), opened the thorax and examined the larynx in my presence. The following is an account of the appearances dictated at the time of the dissection.

On opening the thorax, the cartilages of the ribs proved to be ossified. The left side of the mediastinum, and the surface of the lung contiguous to it, appeared quite dry, as though the parts had been long exposed to air. A similar appearance, though in a less remarkable degree, manifested itself on the right side. The lungs were perfectly sound and natural, excepting a slight adhesion of the right lung to the costal pleura. Somewhat more than half an ounce of aqua pericardii was discovered; the heart itself was perfectly natural.

The membrane common to the larynx and œsophagus, was very much thickened. The epiglottis was perfectly natural; but from the sides of this, to the arytenoid cartilages, the parts were morbidly thickened, increasing in density, as they approached the cricoid cartilage. The orifice of the rima glottidis was somewhat diminished, but exhibited no appearances of unusual vascularity. On dividing the membranes in the posterior part of the trachea, its internal surface appeared coated with thin pus, which continued to shew itself to the base of the cricoid cartilage, and between the membrane common to the œsophagus and larynx, and the posterior surface of the cricoid cartilage. Passing a probe into this part, it was discovered that between this membrane and the muscles of the larynx, even to the

points of the arytenoid cartilages, was formed one extensive abscess.

The upper edge of the cricoid cartilage was ossified, and found bare and rough by loss of surface as from exfoliation. The right arytenoid cartilage was dislocated, and when moved on the cricoid, gave the sensation of two bones, stripped of their articulating cartilage, rubbing together.

Tracing the course of the abscess just mentioned, along the right side of the larynx, it was found to extend between the cricoid and thyroid cartilages, until it reached nearly to the edge of the artificial opening made during life, without however communicating with it in any part.

Remarks.—On reviewing the history of the preceding case, the first circumstance of remark is the unexpected suddenness and violence of the morbid affection of the larynx; an affection which has been so ably and discriminately defined by Dr. Farre, in his valuable communications to the Society, that I shall not here enlarge on its diagnostic character.

In the foregoing case, during the course of twelve hours from the first attack (on Tuesday evening) the disease was fully formed. The swelling and erection of the epiglottis; the slow, difficult, and stridulous respiration, without any pain

or oppression of the lungs, or the slightest erubescence of the visible internal fauces; the exasperated pulse, and perfect inability of deglutition, marked the disease as cynanche laryngea.

The copious depletion of blood, already detailed, to the amount of 66 ounces, (which was uniformly buffed and closely cupped) together with the extravasation of 36 leeches, reduced the general fever, without affording any corresponding local relief. It was, at that juncture, a question whether bronchotomy should be resorted to; and the measure was decided upon, from a consideration of the age and delicate constitution of the patient; and from a persuasion, that time only could reduce the inflammatory tumefaction of the diseased parts. Meanwhile it became essential to facilitate the function of respiration; and to relieve the bowels, and supply nutriment by the rectum. But the nocturnal exacerbations of fever, (unattended however by any observable rigors) greatly discouraged the hope of final relief.

On dissection, these phænomena appeared to be accounted for, by the abscess established, and the continual formation of fresh purulent matter.

It was very evident, both from the symptoms during life, and from the appearances on dissection, that the inflammatory stage of the disorder had entirely subsided some time previous to the dissolu-

tion of the patient. So entirely, in truth, had the urgent symptoms ceased, that, 24 hours before his death, his medical attendants had formed better hopes of the event of his disorder, than they had ventured to indulge at any preceding period. Respiration and deglutition were restored to their natural facility; the fever, though not subdued, had considerably abated; and the animal spirits, and countenance of the patient, were such as to encourage the hope of ultimate recovery. In the course of the following night and morning, the febrile exacerbation recurred with more violence and more alarming symptoms than ever: delirium, stupor, and at length death supervened, by the process common to febrile exhaustion.

I have already stated, that the patient had a severe attack of a similar, and not improbably of the same disorder, eleven years ago. Sir Gilbert Blane has obligingly informed me, that "he was called to a medical attendance on the subject of this case, in London, in Feb. 1802, when the patient, after labouring under catarrh for ten days, was seized with fits of strangulation, which continued, at intervals, for a week, during which period he was thrice bled. The blood was buffy, but not cupped, on the two first occasions; on the third, the buff was absent, and the complaint then assumed a form so purely spasmodic, that opium and assafoetida were given with evident relief." I have since been informed, that twenty years ago,

whilst he was on a journey in Ireland, he was similarly affected, in so severe a degree, that medical aid was summoned from Dublin on the occasion ; and that a long time elapsed before he recovered from the severity of the disorder.

On the late occasion, the unfortunate resolution which he took, of rising from his bed during profuse perspiration (excited by doses of James's Powder) and of occupying many hours in dictating aloud, conspired at once to expose him to a chill over the surface of his body, and to excite preternatural irritation in the larynx. The predisposition to the specific disorder of cynanche laryngea was not only hereditary, but clearly marked in the individual constitution,

From the foregoing recital, I think, may be inferred the expediency of resorting early to the operation of bronchotomy, before the lungs are thrown into a disordered condition ; and before the general powers of life are exhausted by the laborious and imperfect exertion of this vital organ. Had not the secret abscess been formed, in the case before us, the general fever would, in all probability, have subsided with the decline of the local inflammation ; whilst the intervening restoration of the powers of breathing and deglutition might have been effectual in preserving the life of the patient.

Dublin, May 18, 1813.