

THE
DUBLIN JOURNAL
OF
MEDICAL SCIENCE,
1 MARCH, 1838.

PART I.
ORIGINAL COMMUNICATIONS.

ART. I.—*Cases of Acute Inflammation confined to the Epiglottis.* By H. MARSH, M.D., M.R.I.A., one of the Physicians to Stevens' Hospital; Consulting Physician to the City of Dublin Hospital; and to St. Vincent's Hospital, &c. &c.

[Read at the Evening Meeting of the College of Physicians in the College Hall, on the 18th of December, 1837.]

MRS. T—, between 50 and 60 years of age, robust, and of plethoric habit and florid complexion, had been confined for some days to her bed by a feverish cold. The symptoms having rather abruptly assumed a more serious aspect, I was requested to visit her, having been informed by the medical gentleman in attendance, that her case was an obscure one, and that he conceived her disease to be a nervous fever. I found her flushed, agitated, and complaining principally of being restless and sleepless; the moment her eyelids closed,

she started suddenly, gasped for breath, and looked like one about to be convulsed. She sat up erect in bed, and would not for a moment venture to lie down.

A continual accumulation of tenacious mucus obstructed the fauces, prevented sleep, and produced frequent and urgent paroxysms of dyspnœa; her skin was hot and dry; her pulse 120, contracted and resisting; and to the inquiry whether she were distressed by thirst, she replied, she was afraid to drink, the attempt to swallow was productive of so much pain and suffering. On handing her a glass of water, she seemed to dread to put it to her lips.

On making an effort to swallow, a struggle so painful and convulsive, with protrusion of the eyes, ensued, that it gave rise in my mind to the suspicion that she had been bitten by a rabid animal. In attempting to swallow, the fluid was forcibly and convulsively rejected. On examining the interior of the mouth and fauces, I could discover no appearance indicative of inflammation or disease of those parts; the tonsils, uvula, and soft palate, presented a perfectly natural appearance, but the forcible depression of the tongue produced so much pain, and caused such convulsive movement of the muscles, that I was unable to obtain a satisfactory view of the parts which lie more posteriorly; the tone of her voice was scarcely, if at all, altered: the respiration in the intervals between the paroxysms was unimpeded, and it was not at any time in the least degree stridulous.

This case fell under my observation early in my professional life, and I felt very much at a loss to account for the symptoms; it occurred to me at the moment to pass my finger along the tongue, and endeavour to ascertain by the touch the cause of the symptoms. On passing the finger over the tongue, as far towards its root as I could reach, I felt a tense, rounded, prominent body, which, upon close examination, was evidently the epiglottis, considerably enlarged and erect. This at once revealed the seat of the disease, and the source of all the dis-

tressing symptoms ; I had not previously witnessed an instance of this disease, nor had I in the course of my reading met with a description of it. My opinion was at once formed—it was now quite certain that I had to do with a case of acute inflammation of the epiglottis, accompanied with high inflammatory fever.

The treatment was obvious : the patient was instantly and largely bled from the arm, and leeches numerous and successively applied, so as to maintain for some time a continual flow of blood ; the thick tenacious mucus was removed from the fauces from time to time, by means of a sponge attached to a piece of whale bone. After a few hours the symptoms were considerably abated, and some rest was obtained ; bleedings from the arm were repeated a second and a third time, and each repetition of the bleeding was followed by a still more evident abatement of the symptoms ; she was now able, though with considerable pain and difficulty, to swallow. Calomel and Dover's powder were given in repeated doses, and the symptoms having continued for some hours stationary, it was determined to introduce mercury by friction, so as to influence the system as speedily as possible. Half a drachm of mercurial ointment was rubbed in every fourth hour ; moderate ptyalism was established ; the remaining symptoms rapidly subsided, and after the lapse of a few days, scarcely a trace of the disease remained.

This lady has since enjoyed perfect health, no disposition to a return of the disease having manifested itself.

The next very remarkable instance of this affection which fell under my observation, occurred in an individual, whose constitution and temperament were altogether the reverse of those which characterized the case just related. The disease manifested itself in a young person not twenty years of age, of delicate frame, and feeble constitution, and arose in the following manner :

In consequence of exposure to cold, this young lady was

affected with slight rigors ; fever ensued, accompanied with some tumefaction and redness of the tonsils and uvula. The fever and inflammation yielded to the quiet of bed and to diaphoretic medicines. On the third day she was convalescent.

On the evening of the third day, contrary to the injunctions she had received, she got up and exerted herself ; on returning to bed she felt herself chilly and uncomfortable, and spent a feverish and restless night.

Next morning she experienced some pain and difficulty in deglutition, and these symptoms continuing rapidly to increase during the day, I received an urgent message to see her. On visiting her in the evening, I found her in a state of great suffering and distress ; she was incessantly harassed with a profusion of tenacious transparent matter, which was generated about the fauces, and every effort to rid herself of this was attended with very great distress ; the act of protruding the tongue was extremely painful to her ; she feared to lie down ; there were frequent paroxysms of dyspnœa ; she was agitated and apprehensive to an extraordinary degree ; her friends around her were in a state of the greatest alarm ; every effort to swallow was accompanied with violent pain, the liquid was rejected with force through the nostrils, and her distress and agitation were much increased. On examining the fauces there was scarcely a remaining blush, and the tumefaction which had existed on the first attack had entirely subsided ; it was impossible sufficiently to depress the tongue to obtain a view more posteriorly, but on introducing the finger, the epiglottis was found greatly swollen, tense and smooth, and pressure with the finger produced severe pain ; there was no external swelling ; she experienced some uneasiness on pressure upwards at the highest part of the neck ; the face was darkly flushed, anxiety and suffering were strongly depicted on the countenance, and the pulse was incalculably frequent, small, and feeble ; the skin was hot, and covered with a clammy perspiration ; the

voice was natural; there was no cough, but the efforts to clear away the phlegm from the throat were almost unceasing; the respiratory and percutatory sounds were perfectly natural. Leeches were applied externally, as near as possible to the seat of the disease, and fomentations with the decoction of poppies, after the removal of the leeches, perseveringly employed.

I visited her again very late at night, accompanied by Mr. Cusack, whose cooperation I was requested to obtain. There was no abatement, rather an increase of all the urgent symptoms. Mr. Cusack, by sewing a dossil of lint to the end of the finger of a glove, and putting it firmly on his fore-finger, was enabled to remove a large quantity of the adhesive mucus from the fauces, and thus procure considerable temporary ease; a thort interval of sleep in the erect position was thus obtained; leeches were again applied, and fomentations repeated. No medicine could be given by the mouth; purgative injections were administered, and acted well.

At our next visit, though no positive abatement of the symptoms could be said to have taken place, yet the patient on the whole seemed somewhat less agitated and distressed; the fauces were again cleansed in the same manner as before. It was now determined in consultation to apply, by means of the dossil of lint attached to the finger of a glove, a solution of the nitrate of silver (ten grains to an ounce of distilled water) to the inflamed epiglottis. At first some pain, afterwards marked relief, ensued from this application, which was repeated at every subsequent visit, the strength of the solution being gradually increased; and it appeared to me that its employment was always attended with benefit. We also determined to commence at once mercurial treatment, the urgency of the symptoms demanding its immediate application; a drachm of mercurial ointment was accordingly ordered to be rubbed in on the inside of the thighs, every fourth hour, and in addition, to excite as speedily as possible mercurial action in the system, the

surface of the body under the bed-clothes was exposed to the continual contact of volatilized mercury ; the bed-clothes being retained in an elevated position, this was readily accomplished ; the vapour arising from the hydrargyrum cum creta heated, was generated abundantly and retained between the bed-coverings ; and by perseverance in this, the entire surface of the patient's body was kept constantly involved in a mercurial atmosphere.

On the third day from the commencement of this treatment, moderate, but decided pyalism was established ; the occurrence of which was coincident with a marked and rapid abatement of every distressing symptom. Previously to the constitution having been placed under the influence of mercury, a mitigation of the symptoms had been effected. On the third day the patient was able, though with great pain, to swallow small quantities of fluids, and short, but refreshing intervals of sleep were procured. It was not however until the end of the fifth day, when the decided action of mercury on the system became apparent, that a complete and permanent subsidence of the symptoms was manifested.

After this period deglutition became easy, the paroxysms of dyspnoea no longer recurred, and the sleep was tranquil and refreshing.

Towards the end of the third day the epiglottis felt rough to the touch, but still swollen and large : afterwards the feel was that of a body that was wrinkled and puckered, but not much swollen. After the lapse of many days, I examined again the epiglottis, and the touch could detect no abnormal condition of this organ. Convalescence was slow and tedious.

The next case was that of a man aged 40, who after exposure to cold, was affected with much pain and difficulty of swallowing, the liquids regurgitating through the nose in every effort. On looking into the mouth, the tonsils, soft palate, and uvula presented a natural appearance, but at the base of the tongue was seen a round, red, prominent substance, like a small

ripe cherry. The attendant fever was considerable. For three days he was unable to swallow any thing: he was relieved by frequent relays of leeches; warm baths, and anodyne enemata having been used without apparent benefit.

The constant oozing of blood from the leech-bites appeared to be the only effectual part of the treatment. On the third day the inflammation began gradually to subside, and the patient ultimately, but slowly, recovered.

The anatomical characters and relations of the epiglottis fully explain the nature and course of the symptoms detailed. Being studded with glands at its root, the inflammatory irritation stimulates them to a greatly increased secretion of mucus: this adhesive mucus, in constant efforts to detach it, greatly harasses the patient, produces paroxysms of dyspnœa, and prevents sleep. The connexion of the epiglottis with the root of the tongue accounts for the pain felt, when the tongue is moved or protruded, and its situation and the relation which it bears to the muscles of deglutition, fully account for its essential symptoms, pain, spasm, and difficulty in the act of swallowing.

The loose attachment of the mucous membrane to its anterior surface will explain satisfactorily the great extent of the tumefaction, and also that the inflammatory distention should be situated on the lingual rather than on the laryngeal aspect of the organ, as well as for the puckered or wrinkled feel of the mucous membrane on the absorption of the effused fluid.

I shall briefly refer to the only cases of pure unmixed epiglottitis which I have been able to find recorded: they are well marked examples of this disease; the symptoms, however, are imperfectly detailed.

In the first vol. of *Medical Facts and Observations* for the year 1791, a case is related by Mr. Mainwaring of a gentleman about 40 years of age, who having been exposed to the influence of cold during the day, was attacked in the night with a violent pain in his throat and a total inability to swallow. The next morning the symptoms were much increased; the pain was not

in the situation usual in similar affections, but lower down, and felt more anteriorly. When he attempted to swallow fluids, they passed readily to the root of the tongue, where they were not allowed to remain for a moment, but were immediately forced out of the mouth with considerable violence. Upon examining the throat, the tonsils, as well as the palatum molle and uvula were in a natural state, having no tumefaction, nor were they even materially redder than common, so that in this view of the parts, there was no appearance of disease, but upon pulling the tongue forwards, and looking down into the throat, the epiglottis was immediately brought into view in a very unnatural state, and with a very unusual appearance: it was much swelled, extremely red, and looked by no means unlike the glans penis when distended with blood and in its erected state. It stood directly up, so that nothing could pass over it, and there was very little room laterally between it and the sides of the pharynx.

All the other parts were apparently free from disease. Leeches and a blister were applied externally to the throat, but were followed by scarcely any abatement of the symptoms. The complaint continued with little or no diminution until the fourth day, when the swelling or more properly the sensibility of the epiglottis was so far reduced as to allow the patient to swallow small quantities of fluids; and by the seventh day he could with some pain and difficulty take solid food.

Mr. Manwaring considers this affection of the epiglottis when entirely independent of disease in the neighbouring parts, as one of very uncommon occurrence. The mode of treatment particularly as it did not appear to be very efficacious, has been in a great measure passed over. In the third vol. of the *Transactions of a Society for the Improvement of Medical and Surgical Knowledge*, 1808, Sir Everard Home relates three cases in which the epiglottis had become enlarged in consequence of inflammation, while the tonsils and other neighbouring parts were nearly in a natural state: this appearance, he adds,

was of such rare occurrence, that none of his medical friends had met with it. The first instance occurred in a man 40 years of age, rather short, of a stout make, with a tendency to corpulency, and of sedentary habits, who had been exposed to rain, during a very tempestuous evening. In the course of the night, while in bed, he felt very uneasy in his throat, and was unable to swallow. The uneasiness increased, and, in the morning, every thing he attempted to swallow was rejected with considerable force. On examining the throat, there was no appearance of swelling in the tonsils, nor of inflammation of the palatum molle or uvula. These parts were not even more red than they usually are, but immediately beyond the root of the tongue there was a rounded, projecting substance, of a bright red colour, bearing a very close resemblance to the glans penis, in its distended state.

At first I was at a loss to know what this could be, but on examining it more narrowly, I found that it was the epiglottis much enlarged, the membrane covering it being inflamed and thickened. It continued for three days in this state, and the patient could not swallow during that period; but there was no sensation of thirst. Leeches were applied to the outside of the throat, and immediately gave some relief. The warm bath was used, but without apparent advantage. Dover's powder was administered by clyster, but it did not bring on perspiration, or soothe the distressing symptoms. The inflammation subsided gradually on the fourth day; he could swallow fluids when his thirst became excessive. On the seventh day he could take his food as usual. During the whole of the attack his breathing was not at all affected. The parts recovered so entirely, that he never afterwards had any return of the complaint, or uneasiness in the part which had been affected.

The other cases were so exactly similar to this, that it is unnecessary to detail them.

The following cases of acute inflammation of the epiglottis,

by Dr. Burne, were communicated and read at the College of Physicians in London by Dr. Hawkins.*

The author observed, that acute inflammation affecting the epiglottis without extending to the contiguous parts, is so rare a disease that few examples of it are to be found on record. Two cases of this nature, however, had fallen under Dr. Burne's notice. The first patient recovered, but the second perished at the end of four days. In both, the most remarkable symptoms consisted in the extreme difficulty or impossibility of swallowing, while the throat did not exhibit any appearance of tumefaction.

A journeyman, aged about fifty, at the time he was seen by the author, had been labouring under difficulty of swallowing for thirty hours. So great was the impediment to deglutition, that not a drop of water was allowed to pass. On attempting to look into the throat, great difficulty was experienced, but this having been, by some perseverance, overcome, a satisfactory view of the parts was at length obtained. The fauces were open and unobstructed, having a diffuse redness over them. Anxious to ascertain what might be the cause of the difficulty of deglutition, the tongue was forcibly depressed, when the epiglottis came into view—prominent, red, swollen, and resembling a Kentish cherry. The complaint was nearly local, consisting in extreme difficulty of swallowing, and in the extreme exhaustion dependent thereon.

The system generally sympathized but little—there was inflammatory fever indeed, but it was mild. He had been already bled to syncope; leeches had been applied to the throat, and he had been purged. Leeches were again applied, and tartar emetic given in pills, while mercurial ointment was rubbed in, to guard against the probable consequence of infiltration about the glottis. This treatment brought the patient up to the fourth day, when the fever and inflammation had subsided; but the epiglottis continued so much swollen, as to render the introduction

* London Medical Gazette, vol. vi. p. 313.

of nourishment in any form extremely difficult, though it now became strongly indicated by the state of exhaustion, and by the return of the appetite. Next day he was able to swallow fluids, and ultimately did well.

The second case occurred in a lady far advanced in pregnancy, who was attacked with the usual symptoms of cold and sore throat, to which was added tenderness about the larynx discoverable by pressure made externally.

Next day deglutition was almost impossible, yet unattended by any tumefaction of the fauces. Bleeding was had recourse to, both generally and locally, but the issue was unfavourable. On examination the epiglottis was found stiff and thickened, with traces of pus, the surrounding parts of the larynx were sound; the lungs unfiltrated with serous effusion. Dr. Burne thinks that blood-letting from the jugular vein, as being in the neighbourhood of the inflammation, would probably be the most eligible mode of depletion. To this may be added purgative enemata, mercurial inunction, and blisters to the throat. Dr. Cholmely and Mr. Stanley, who also attended the second case, recommended scarification of the epiglottis, as likely to diminish the tumefaction of the part. The symptoms were not such as to require tracheotomy.

My friend, Dr. Fleming, has favoured me with the particulars of a case of acute oedema of the lingual surface of the epiglottis. The patient had been under treatment for secondary syphilis, when he was attacked with uneasiness in the throat and pain on deglutition. The fauces and pharynx appeared healthy, nor did the finger discover any lesion of the superior border of the epiglottis; but its lingual surface was thickened and painful. There was no laryngeal symptom. In the course of two days fever supervened, and the patient experienced a most distressing sense of choking, accompanied by paroxysms of dyspnœa so severe as to threaten suffocation. The voice continued perfect; there was no stridor, and in the intervals of the attacks the respiration was tranquil. The paroxysms of dyspnœa were

brought on whenever the patient attempted to lie down. He suffered much from thirst, which he could not gratify in consequence of the drinks being rejected through the nostrils.

On examining by the finger, the base of the tongue was found painful, and giving the sensation of two distinct tumours, separated by the frænum of the epiglottis. The disease gradually subsided under repeated leeching, fomentations, blisters, &c. For some time the lingual portion of the epiglottis remained in a state of chronic œdema.

OBSERVATIONS.

In the cases, the facts of which have been just detailed, the inflammatory action was limited in extent; not extending probably beyond the anterior surface of the epiglottis. The circumscription of the inflammation was marked by positive as well as negative signs. The inspection of the fauces proved that it did not exist in the parts anterior to the epiglottis—the absence of dyspnoea except in paroxysms; of stridulous breathing—the natural tones of the voice, when the mucous matters were detached—the exemption from cough—the result of stethoscopic examination; all these negative signs prove that neither the glottis; larynx, nor bronchial mucous membrane, shared in the inflammatory action. These cases are therefore examples of unmixed, circumscribed, inflammation of the epiglottis.

I am inclined to think that the disease termed cynanche pharyngea, described in systematic works, is but an example of this disease; the examination, however, of the epiglottis, either by inspection or by the touch, having been neglected, the true seat of the disease was overlooked.

Numerous and interesting cases of inflammations of the epiglottis, both acute and chronic, are upon record, several in the periodical publications; some of the most valuable of these are to be found in Mr. Porter's excellent work on the Surgical Pathology of the Larynx and Trachea, and also in Dr. Stokes's lately

published and valuable work on the Diseases of the Chest, but in all these the disease of the epiglottis forms but a link in the united chain of symptoms. It is associated with morbid action, extending either from above downwards, or from below upwards, engaging either the tonsils and soft palate, or, as most frequently happens, the glottis and larynx.

Slight cases of this disease are not unfrequent, but require little or no treatment. In cases of medium severity, the symptoms are not very urgent, and will, with mild antiphlogistic treatment, subside ; but in the more acute and intense examples of this disease, the urgency of the symptoms and the sufferings of the patient demand the most prompt and vigorous treatment. From the cases I have observed, and from those recorded, I am disposed to gather that the disease has a tendency to abate either on the third, fifth, or seventh days, but if not combated by energetic remedies, it may end in suppuration, as it did in one recorded case, or it may extend downwards, involve the glottis, and thus produce a still more dangerous disease, œdema of the glottis ; or by causing repeated paroxysms of dyspnoea, it may give rise to pulmonary infiltration ; or it may but partially subside, and leave behind a thickened, indurated, and permanently diseased condition of the epiglottis. To allay the urgent symptoms, and prevent these consequences, active treatment, regulated of course by the patient's constitution, is imperatively required. In one of the cases I have recorded, frequent and large bleedings, general and topical, with the active administration of mercury, were necessary to reduce both the concomitant fever and the local inflammation. In another, the delicate constitution, the feeble pulse, the state of the skin, induced me to restrict bleeding to the reiterated application of leeches as near as possible to the seat of the disease. To subdue inflammatory action, as well as to prevent lingering chronic disease, mercury is invaluable. Fortunately it can be applied as effectually, and I think as rapidly, by the skin, as when administered internally. In cases such as those

now detailed, where the ability to swallow is lost, its external application, both by friction and by vapour, is of immense value, and it seems to me that in the more severe cases of the disease, this part of the treatment should not be omitted. I think the application of the nitrate of silver, as suggested and practised by Mr. Cusack, was decidedly useful. Fomentations long continued, though a minor remedy, are not without their value. Blistering I did not think necessary, nor would I apply a blister till the inflammatory excitement were markedly reduced.

From the administration of tartar emetic, at the period of commencing restoration of the power of deglutition, I abstained, fearful of exciting vomiting, which would, I conceive, be distressing, perhaps dangerous to the patient. Were, however, the fever to continue, and the symptoms not to yield satisfactorily, it might be given, guarded with opium in carefully regulated doses. The influence of this combination of medicine, in diminishing excitement, and reducing inflammation, is established incontestibly in various conditions of disease. But the symptoms, in the cases recorded, yielded so completely to bleeding, mercury, and fomentations, that I did not deem it necessary to resort to other means, and in none of them has any trace of chronic disease been left behind. Now, to contrast the effects of intense inflammation with those resulting from the actual loss of the organ, I shall give a highly interesting case recorded by Baron Larey, of the excision, if I may so express it, of the epiglottis, by a gun-shot wound.

“A soldier was wounded at the battle of Abon-qyr ; the ball entered at the angle of the jaw, crossed the throat obliquely, and came out at the jugular region on the opposite side. The back part of the tongue was furrowed, and the epiglottis carried away. The wounded man spat it up after the accident, and shewed it to the surgeon who had first rendered him assistance. The patient suffered little, but his voice could only be heard with difficulty, in a hoarse and very feeble manner. When he attempted to swallow, for the first time, he got a convulsive and suffocative

fit of coughing, accompanied with vomiting. He was tormented by thirst, which the excessive heat of the season and the irritation of the wound produced.

“He experienced already violent pain in the stomach, and the inability to sleep was continual; the pulse weak and rapid, and wasting of the flesh began to be manifest. After having endeavoured to make him drink, I was convinced the cause of the suffocations and the impossibility of swallowing depended on the permanent patency of the glottis, the valve of which had been carried away by the ball: a singular, and I believe, unprecedented accident. The indications were not less difficult to fulfil.

“The most urgent was to appease the hunger and thirst which tormented this honourable victim. I was most fortunately provided with a gum-elastic tube, which I introduced with the necessary precautions into the pharynx, and, by the aid of this, I got the patient to swallow. This method, long-continued, saved the life of the soldier, but the difficulty of swallowing continued, and speech was not restored till after a considerable lapse of time, and still in a very imperfect manner. At about the end of six months he could swallow without the tube, and on his departure for France, he could eat rice, which he prepared in the form of little balls.

“The functions of speech and deglutition have been in time made perfect, no doubt because the arytenoid cartilages will, in part, supply the place of the epiglottis by their development.”

Thus we see that very similar symptoms are produced by intense inflammation, which tends to impair or annihilate function, and the total removal of the organ.

I have never met with an example of the acute, nor indeed of the chronic form of this disease, arising from the same causes as in adults, in very young children; in them, however, it is not unfrequently produced, if I may so say, artificially.

It is produced by an accident to which the children of the poor are liable. Slatternly mothers often permit their children

to drink from the spout of a tea-kettle, or tea-pot, and they are thus led to a habit, which, if the kettle should happen to contain boiling-water, may prove fatal. The symptoms produced by this accident are those which characterize inflammation of the fauces, epiglottis, and glottis, but not usually extending into the trachea. In the third volume of the Dublin Hospital Reports, there is a case given by Dr. Burgess of a girl of three years of age, who drank boiling-water from the spout of a tea-kettle, from which great swelling of the parts immediately ensued, thereby preventing deglutition, and impeding respiration.

In about two hours after the accident, on looking into the mouth, it appeared as if a large piece of raw flesh had been forced into the fauces, and had completely filled up the passage; respiration was performed with great difficulty, and was rapidly becoming more laborious; in fact the child appeared to be dying, when bronchotomy was performed, by which life was saved.

I asked Mr. Porter what the results were of his observations in the many cases of this accident which have fallen under his cognizance; his reply was, that in every instance the epiglottis was to a greater or less degree inflamed. From the nature of the accident, such is the result which might be anticipated.

Causes, such as chills of cold, and exposure to wet and damp, which in adults are productive of inflammation of the epiglottis, and of the glottis and larynx; an inflammation from which effusion into the submucous cellular tissue results—in young children produces a disease similar in its effects, but totally different in its results. They are affected with croup.

The inflammatory action, either as happens in a few instances, confined to the larynx and a few of the rings of the trachea, or as most frequently happens, extending itself along the whole of the mucous membrane of the bronchial ramifications, issues in effusion; not as in adults, under the mucous membrane, but upon its external surface, thus forming the adventitious membrane which obstructs the air passage, and

forms one of the most remarkable pathological conditions of croup.

That the inflammatory deposition should occur *under* the mucous membrane in adults, and *upon* it in children, is a very curious fact, and will help to explain the infrequency of the disease of which we now treat, in very young children. I remember having been acquainted many years ago with a very intelligent German physician, who informed me he had tried a series of experiments on this subject ; his object was to produce croup in animals ; his experiments were made on dogs ; by opening the trachea and applying irritants, (of which he found the tincture of iodine the most certain,) he succeeded in producing the symptoms and effects of croup ; but as he particularly stated, the adventitious membrane he could not cause in full grown dogs, it was only in very young ones that this effect resulted from the artificially excited inflammation, and the younger the more certain. This gentleman has since published the results of his experiments. Should then the epiglottis become the exclusive seat of inflammation in very young children, we should rather expect a layer of lymph, forming on its external surface an adventitious membrane, than the sub-mucous effusion we find in adults.

It is of some consequence to remark, that in almost every case of acute laryngitis, indeed, so far as my own recollection leads, I would say in every case, the epiglottis partakes in the inflammatory action.

I shall quote from the short, but beautifully written treatise on Laryngitis, inserted in the *Cyclopædia of Medicine*, the words of the late lamented Dr. Cheyne : “ That laryngitis is an inflammatory affection, we have abundant proof ; the fever which belongs to the disease is attended with increased heat of surface ; frequent and strong pulse ; the blood is sisy ; the parts affected are swelled and painful : and we sometimes obtain a view of a portion of the affected part in a state of intense inflammation.

“When the tongue is not much swollen, by depressing its root downwards and forwards by means of a spatula, we can discover the epiglottis, erect, florid, rounded and swelled. One writer on the disease has well described the epiglottis, as being enlarged, red, glossy, and nearly of the size and appearance of a plumb.

“Inflammation, thus denoted by swelling and glossy redness, is doubtless the state of the glottis as well as of the epiglottis.”

Dr. Cheyne adds in another place :—

“If we had any certain means of ascertaining when the membrane is merely inflamed, and when it is œdematous as well as inflamed, much of the difficulty which attends the treatment of the disease would be removed.”

Now, what do I deduce from these quotations? the valuable fact, that the epiglottis being generally within the reach of vision, always of touch, we are enabled to judge of its real state; we can know whether or not it is œdematous; we can thence deduce and judge of the state of the glottis; and this very investigation might decide the important and difficult point in practice, whether or not the time is arrived when the operation of tracheotomy should no longer be postponed.

It might be the very means of determining the immediate performance of an operation, which, if delayed until the functions of the brain be overthrown, can have no other issue than to add to the list already too long of unsuccessful operation—unsuccessful because postponed to too late a period. I have long been in the habit of instructing the pupils at Stevens’s Hospital to educate the eye and the finger, that they may be enabled, from experience, both by touch and sight, to form a correct judgment of the state of the epiglottis; as a practical guide in cases of laryngitis this is of considerable value.

As it may be interesting to some of my hearers, and as the case bears upon our subject, I shall here introduce the first recorded case of laryngitis—the disease which terminated the

earthly career of one of the most conspicuous and one of the most truly great men who ever lived, General Washington.

“ Some time on the night of Friday, the 10th of December, 1799, having been exposed to rain on the preceding day, General Washington was attacked with an inflammatory affection of the upper part of the wind-pipe, called in technical language, cynanche trachealis. The disease commenced with a violent ague, accompanied with some pain in the upper and fore part of the throat, a sense of stricture in the same part, a cough, and a difficult rather than a painful deglutition, which were soon succeeded by fever and a quick and laborious respiration. The necessity of blood-letting suggested itself to the General ; he procured a bleeder in the neighbourhood, who took from his arm in the night, twelve or fourteen ounces of blood. He could not by any means be prevailed on by the family to send for the attending physician till the following morning, who arrived at Mount Vernon at about eleven o'clock on Saturday. Discovering the case to be highly alarming, and foreseeing the fatal tendency of the disease, two consulting physicians were immediately sent for, who arrived, one at half-past three, and the other at four o'clock in the afternoon. In the meantime were employed two pretty copious bleedings, a blister was applied to the part affected, two moderate doses of calomel were given, and an injection was administered which operated on the lower intestines, but all without any perceptible advantage, the respiration becoming still more difficult and distressing. Upon the arrival of the first of the consulting physicians, it was agreed, as there were yet no signs of accumulation in the bronchial vessels of the lungs, to try the result of another bleeding, when about thirty-two ounces of blood were drawn without the smallest apparent alleviation of the disease. Vapours of vinegar and water were frequently inhaled ; ten grains of calomel were given, succeeded by repeated doses of emetic tartar, amounting in all to about five or six grains, with no other effect than a copious discharge from the bowels. The powers of life

seemed now manifestly yielding to the force of the disorder : blisters were applied to the extremities, together with a cataplasm of bran and vinegar to the throat. Speaking, which was painful from the beginning of his complaint, as well as through every succeeding stage of it, now became almost impracticable ; respiration grew more and more contracted and imperfect till half-past eleven on Saturday night, when, retaining the full possession of his intellect, he expired without a struggle.

“ He was fully impressed from the beginning of his complaint, that its conclusion would be mortal. He considered the operations of death upon his system as coeval with the disease ; and several hours before his death, after repeated efforts to be understood, succeeded in expressing a desire that he might be permitted to die without further interruption. During the short period of his illness, he economized his time in the arrangement of such few concerns as required his attention, with the utmost serenity, and anticipated his approaching dissolution with every demonstration of that equanimity for which his whole life had been so uniformly conspicuous.”

Such were the last moments of the life of this great man, whose love of country always rose far superior to his love of self ; who, in the midst of difficulties, and thwartings, and unjust aspersions, never swerved from his steady course, never lost sight of his one great object—the liberation of his country ; who, surrounded by obstacles which would have borne down any other mind than his, led his ill-equipped armies to victory, and having filled the cup of glory, retired contentedly—without even aiming at personal aggrandizement—to his home, his house, to his sequestered and unostentatious agricultural pursuits. The same calmness and strength of mind which marked the course of his eventful life, did not forsake him as it approached its close. Whilst to history belongs the deeds of a man, the rarest of his kind, who was in truth a patriot, to us belongs the interesting document which records the disease, then supposed a new one, now well known, which closed the earthly

existence of this remarkable man. The early performance of the operation of bronchotomy might have saved General Washington's life.

A very interesting and curious case published in the 5th vol. of the Dublin Hospital Reports, I shall here introduce.

Case of Attempt at Suicide, with Danger of Suffocation by the falling down of the Epiglottis. By Dr. Houston.

“ In March, 1828, a servant out of place, residing in Duker-street, during a fit of delirium brought on by intoxication, attempted to destroy himself by cutting his throat with a razor. I saw him in about ten minutes after, and found him almost lifeless. The pulsations of the heart were almost imperceptible; the pulse at the wrist had ceased to beat; the limbs were cold, and all feeling and consciousness lost. The wound, which was frightfully deep, extended more towards the left than the right ear; the razor had entered between the os hyoides and the thyroid cartilage, and disunited them so completely, as to allow the former to ascend with the tongue into the mouth.

“ The pharynx was laid wide open, and the epiglottis severed from its attachment to the tongue and os hyoides, and left hanging by its pedicle to the back of the pomum Adami; the carotids had remained untouched, and the bleeding was inconsiderable. It appeared difficult at the moment to account for the sudden extinction of life; the symptoms were evidently those of suffocation, but the cause was not at first understood.

“ I passed my finger into the wound, and found to my surprise, that the epiglottis, loosened from its upper and lateral attachments, had fallen back over the rima glottidis, and completely intercepted the passage of air to the lungs. I raised the obstructing body and drew it forwards; the chest soon afterwards began to heave; respiration returned; the heart and pulse again beat, and consciousness and sensibility were re-established.

“ It required some effort of my fingers to hold up the epi-

glottis, as the air at every inspiration tended to force it back again to its natural position.

“ While thus occupied with the patient Mr. Porter entered the room ; I explained to him the singular nature of the case, and how between my finger and thumb I held the regulation of a man’s life or death. The top of the epiglottis was then brought over the edge of the thyroid cartilage and secured to its anterior surface by a single stitch.

“ The man in a short time sat up and attempted to speak, but was unable to articulate.

“ He was taken into the Meath Hospital, under the care of Mr. Porter, from whom I learned that he never recovered from the delirium which led to the perpetration of the act, and died in about a week after of erysipelatous inflammation of the neck and throat.”

We have not on record any instance of congenital mal-formation of the epiglottis. Mr. Barker mentioned to me that a child about fifteen months old, died suddenly whilst playing and laughing : that whenever this child laughed, she emitted a peculiar sound ; and he stated that on examination of the body by the late Dr. Andrew Johnson, he found the epiglottis mal-formed and elongated ; that the elongated portion plugged the aperture of the glottis, and thus caused immediate suffocation.

I have stated the fact as reported to me by Mr. Barker : I do so chiefly with the view of exciting attention to the subject of mal-formations of the epiglottis : future observations may bring to light points not heretofore ascertained.

My chief object in this paper has been to dwell upon the symptoms and treatment of acute inflammation of the epiglottis—a disease which, though often alluded to, has not hitherto been accurately described ; and thus to supply a deficiency in the history of the symptoms, progress, pathology, and treatment of disease. This, from having witnessed some severe cases of the

disease, I am enabled, in some measure, to do. Accumulating facts will render the history more complete. I have not touched upon the chronic diseases of this organ. It may be hypertrophied, or atrophied, or ulcerated, or utterly destroyed by ulceration, (of which Mr. Reid furnished me with an interesting example,) and these effects may arise from neglected inflammations or from scrofulous, or syphilitic, or carcinomatous causes; but in every chronic case, the disease is not confined to the epiglottis: the neighbouring parts partake more or less in the morbid degeneration. Were I to pursue the subject further, it would lead me into a length of detail, quite unsuitable to the present occasion. I shall then conclude my observations by an expression of the pleasure it gives me, who am now a veteran in the service, to observe the zeal with which the science of medicine is cultivated in this city. Not in any city in Great Britain—I might say in Europe—is it prosecuted with more ardour and success.

This very assembly, these meetings in this Hall, now commencing for the season, have tended to give an additional impulse to our exertions. The *vis inertiae* is almost as much an attribute of mind as it is of matter, and every stimulus applied to set the mind in motion and propel its energies, is calculated to augment the amount of human enjoyment, and in our pursuits especially to enlarge the sphere of usefulness, and to place more and more within our reach the application of those means largely provided by creative wisdom which are designed to alleviate suffering and to prevent and stem the destructive progress of disease.

ART. II.—*Journal of an Asthmatic.*

It may be necessary to state, that the following diary was kept at the request of one of the Editors of this Journal. The gentleman who is the victim of the disease which he so well de-