and incorporated with the walls of the vessels. And, in one case, I even succeeded in showing vascularisation of the blood-clot through the medium of the plastic basis at the point of ligature. As to the organisation of carbolised catgut ligature, I am sceptical. Mr. Lister says that any chemist will tell us that it will not dissolve. I reply that I will believe my own eyes rather than "any chemist", for I have seen it soft and jelly-like, even whilst retaining its form; and, in a stump, I have seen the femoral surrounded by catgut ligature on the fourth day after amputation, bleeding whenever compression was removed, showing the catgut had lost its constrictive power; and it was as easily wiped away with the finger as if it had been recent lymph, thin clot, or other semi-fluid matter.

Two things seem to be admitted by Mr. Lister and his followers in the discussion: that other simpler methods than the spray system may be considered antiseptic, and also that the system is limited in its application; that, for instance, it could not be carried out, Mr. Lister says, in cases where sinuses had existed in the vicinity of the joints which were excised. How many cases demanding excision or amputation do we meet with where such complications do not exist?

THE TREATMENT OF ACUTE AND OF CHRONIC CATARRHAL LARYNGITIS IN ADULTS:

WITH SOME REMARKS ON THE USE OF THE LARYNGOSCOPE.*

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WHEN the very kind and flattering invitation of my friend the Chairman, to read a paper on some laryngeal subject before this Branch of the British Medical Association, came to my hand about a fortnight ago, I at first regretted very much that the shortness of the time did not allow me to prepare a paper for this occasion which possessed the merit of some novelty in its contents. Soon, however, this feeling yielded to the consideration whether a paper on some new discovery relating to the physiology or pathology of the larynx was in itself a suitable or desirable thing for the present occasion. In spite of the short duration of its existence, laryngoscopy, like most of the other physical methods now in use for medical purposes, has already attained so high a degree of perfection, and most of the questions relating to the pathology of the larynx have been solved in so thorough and satisfactory a manner, that, with but few exceptions, all new additions to our knowledge on this subject can of necessity be only of a more limited and minor interest to the bulk of the profession, however interesting they may be to the specialist. But what would be the good, I continued to ask myself, of communicating some of such more or less unknown details, if the subject itself on which they are based is so little favoured and known amongst the great majority of the profession, as unfortunately happens to be the case in this country? For, much as it is to be regretted, undeserved as it is in my firm and sincere conviction, strange as it certainly is in a country which in so many scientific and practical respects marches ahead of the medical science of the world—the fact cannot be denied that laryngoscopy—a method which has been for the last fifteen years at least a thoroughly acknowledged and respected one throughout Europe and America, has as yet by no means conquered in this country the position which it not only deserves, but which, I venture to predict, it will occupy in not too far distant a time.

I am perfectly aware that, whilst thus speaking, I shall encounter the usual half-pitiful, half-distrustful, feeling to which in our profession every man is exposed who ventures to urge the necessity of certain things which are not yet acknowledged as necessary by the bulk of the profession. "Oh, he is a specialist; of course he is an enthusiast for his specialty." Such is the usual phrase by which even well-meaning men frequently believe that they have satisfactorily settled this question. But am I really too enthusiastic? Do I say that there is no good besides the laryngoscope, and that it is infallible? Or do I demand a recognition of an unknown method, which may perhaps have certain advantages, but not great enough to justify its being made compulsory for every student of medicine? What I want is simply what is already granted everywhere except in this country, viz., to see laryngoscopy acknowledged as one of the most important and useful physical methods of investigation, and to be thus placed on a par with auscultation, percussion, ophthalmoscopy, otoscopy, and similar methods. It deserves and will have this position. It is only six weeks since I had the advantage of talking this question over with one of the greatest living medical authorities, whose name is well known and respected in this country as

well as in the whole civilised world, viz., with Professor von Ziemssen in Munich. "If I find a man", he told me, "in the final examination, who does not know how to use the laryngoscope, I pluck him just as I would pluck a man who does not know how to percuss and to auscultate; for the importance of the laryngoscope is so great, not only, of course, for laryngeal diseases, but for constitutional ones also, that every medical man must know how to use it; whilst, at the same time, laryngeal diseases form one of the most frequent and most important classes of human pathology." These are his own words; and if I add that the knowledge of the use of the laryngoscope is now compulsory in Germany for every student undergoing his final examination, I hope I have satisfactorily shown that what I heartily wish to see acknowledged in this country also is not an unjustifiable desire of a young and enthusiastic specialist, but that it must have been accepted as a necessity by the authorities of a country which in its turn is always ready to learn from England. I do not know whether the knowledge of the laryngoscopic method is a compulsory subject of the medical education in France and in America; but, having been the reporter on laryngology of the *London Medical Record* for some time, and having thus had the opportunity of seeing almost everything written on this subject in the world, I can conscientiously assure this meeting that it must be almost universally known. The same is to be said even in a higher degree of Austria, where, I believe, it is compulsory.

Turning, now, to this country, in which I have reason to believe the laryngoscope is but very scantily used, it would perhaps not be so very difficult to find some of the reasons for the evident dislike in which, at the present time, so valuable a method is held; but this task is not a very grateful one, and I need not discuss it here in detail. Yet I may point out, amongst other causes, the conservative nature of the English method of teaching, the natural distaste to acquire facility in the employment of a new instrument, and the defective organisation of special departments in many general hospitals. Other controversial aspects of the subject I pass over. However this may be, we must look for improvement. A truly satisfactory change of the present conditions will, I am afraid, not take place until the authorities who have to decide about these questions become themselves aware of the importance of the subject, and make its knowledge compulsory for the final examination. Until this *pium desiderium* be fulfilled, it is the duty of those who devote a great part of their time and studies to this neglected subject never to rest, but to show again and again how important—nay, how indispensable—the laryngoscope is, not only for scientific achievements, but for the practical purposes of the daily life of the general practitioner. It is this reason, in fact, which made me choose the treatment of acute, and especially of chronic, laryngitis as the most suitable subject for this occasion. I may state here, in parenthesis, that I have added the words "in adults" because, if I should also speak of the treatment of acute laryngitis in children, I could not have avoided touching upon the vexed question of the differential diagnosis between croup and acute laryngitis, and because, in the event of a debate following this paper, I did not wish to divert attention in an entirely different direction.

No class of patients comes more frequently in hospital and private practice under the eyes of the laryngoscopist, than those suffering from common catarrhal chronic laryngitis. He comparatively seldom sees cases of acute laryngitis. The great disproportion between the number of cases of either affection, the chronic being, however, in the majority of cases, only the result of the acute form, quite justifies the conclusion that, in this country, patients suffering from acute laryngitis apply comparatively rarely to a specialist, but either altogether neglect the affection in its early stages, or seek the aid of their general medical adviser. But if we should take the opposite view, and believe that patients who have somehow acquired a more chronic form of the affection applied, as a rule, directly to the laryngoscopist, we should commit a great error. On the contrary, in the vast majority of cases, the patient has been under treatment for a considerable time, sometimes for months and longer, and has had a great many different medical advisers. The number of prescriptions which these patients are always ready to show is formidable. It is, in fact, the *British Pharmacopæia*, and a little more, which has been tried on them in the form of mixtures, pills, lozenges, gargles, inhalations, and local applications to the pharynx. I need not say that all these things, instead of benefiting the patient, often not only do not improve the condition of the larynx, but render the treatment a much more tedious one, because they allow the active process in the larynx to progress without let or hindrance during their administration. In not a few cases, they directly do harm. Especially the applications of strong astringent solutions, especially of nitrate of silver, which are frequently used as a last resort, but never applied to the diseased larynx, but always to the innocent pharynx, cannot, in my opinion, be condemned strongly enough. The patient's pharynx, if he

* Read before the East-Surrey District of the South-Eastern Branch.

apply at last to the laryngoscopist, having been treated for weeks and months without any success, first internally, then by inhalations and lozenges, finally by these unfortunate pharyngeal applications, looks simply dreadful. Sometimes it is quite impossible, in the first sitting, to get a satisfactory view of the larynx, on account of this artificial irritation of the pharynx; and not unfrequently the treatment must be commenced by giving the patient a few days' rest to recover from the results of these applications to his pharynx, stomach, and entire constitution; for it is superfluous to say that the sickness and the efforts at retching which often follow for hours the application of a strong solution of nitrate of silver to the pharynx give a great shock to the whole system. It is unfortunate enough that we sometimes cannot avoid touching a spot in the pharynx whilst introducing strong solutions of nitrate of silver into the larynx; but, with the only exception of syphilitic ulceration of the pharynx, in which affection, by the way, the diseased spots are better touched with the solid stick, such a solution ought never to be applied intentionally to so sensitive a part as the pharynx. In the event of the pharynx being simultaneously diseased, we have, according to the nature of the affection, plenty of remedies at hand to replace the nitrate of silver, and they have the same beneficial results as this remedy, without its disagreeable and noxious effects.

I will now try to give a short outline of the treatment of both the acute and the chronic forms of this affection, which, I hope, combines scientific requirements and practical experience. I have but little new matter to bring forward, and many of my statements will be found in more or less different words in the text-books treating of the subject; but the foregoing remarks about my experience with regard to the treatment now in use in this country justify its repetition on this occasion.

"Diseases of the larynx do not differ materially in pathology from diseases of like tissues or tissue-elements elsewhere." This simple commonplace statement, which is the opening phrase of one of the best American text-books on laryngology, that of Solis Cohen, is unfortunately but too frequently neglected by those who have the care of the early stages of catarrhal inflammation of the larynx. An acute inflammation of the laryngeal mucous membrane is characterised, like every other inflammation of mucous membranes, by the cardinal symptoms of heat, swelling, pain, redness, and diminished function, and ends, like every other acute inflammation, either in resolution, or passes into the chronic form, whilst in some very rare cases it may result in oedema. I have refuted elsewhere the attempt to call "acute laryngitis" only that form terminating in oedema. "Oedema of the larynx is but one of the terminations of acute laryngitis, fortunately occurring comparatively rarely, whilst a very acute laryngeal inflammation might quite as readily pass into complete restoration to health or into the chronic form. To consider all inflammations of a recent character not leading to oedema from their very beginning as subacute, is by no means justified, or, as I should have expressed myself, quite contrary to general scientific terminology." I repeat this statement here, because this evidently false terminology seems to have gained ground somehow in this country, so that more than once pupils of mine, to whom I showed patients suffering from this affection, were quite astonished when I used the term "acute laryngitis" alternatively with the synonym "acute laryngeal catarrh" in speaking of the same case.

Acute laryngitis thus being an acute inflammation of the laryngeal mucous membrane, which in adults can hardly be mistaken for any other affection, must accordingly be treated like any ordinary acute inflammation of other mucous membranes, *i.e.*, expectantly. In the overwhelming majority of cases, it is quite sufficient to preserve the patient from the continuation of the influences which have produced the disease; to keep him for a few days at home in an uniformly warm atmosphere, and to let him use warm steam inhalations, to which some compound tincture of benzoin, lupulin, or conium may advantageously be added.* Antiphlogosis, in the form of a cold-water compress round

* I am very glad that the discussion following the reading of my paper has given me the opportunity of correcting an evident error of mine, which is, however, I have reason to believe, shared by a good many members of our profession. For years I have prescribed and advised, amongst other drugs, to add some common salt to the hot steam inhalation, in the belief that the construction of the "eclectic inhaler", which I mostly make use of, favoured the entrance of the chloride of sodium into the air-passages. In the class of instruments to which this apparatus belongs, the patient does not only inhale the steam, but a mixture of steam and atmospheric air, which is drawn through the hot solution, and thus becomes "thoroughly impregnated with the active principle of the medicament" (Mackenzie). Now, I always supposed that the current of air thus running through the liquid was strong enough to carry mechanically with it a considerable quantity of minute particles of salt into the respiratory organs of the patient. Thus I have made use of it—though the inhaler is recommended by Dr. Mackenzie for volatile solutions only—for this class of inhalations also: I even thought that I had observed somewhat better results from these inhalations than from the pure steam inhalations, which I explained by the fact that chloride of sodium dissolved mucous accumulations, and thus recommended the salt as an advantageous addition to the steam inhalation in this paper. To this statement exception was taken by Dr. Bowles of Folkestone, to whom I am very much indebted for drawing my attention to

the neck, and of little pieces of ice to be sucked continually for some time, will often, if administered at the very onset of the affection, check its further progress. If the catarrh be not localised in the larynx alone, but also affects the other parts of the respiratory tract—nose, pharynx, and bronchial tubes—the common diaphoretic treatment of these general "colds" often shortens its duration, especially when administered on the second, third, or fourth evening from the beginning. The most indispensable condition for a complete recovery is of course the same as in all other organs when inflamed, *viz.*, complete rest of the diseased part. I can scarcely sufficiently strongly protest against the absurd advice of many teachers of singing to their pupils when suffering from acute laryngeal catarrh, *viz.*, to sing "through" their hoarseness! Of course it is possible, in these early stages, to overcome, by a great effort and for a short time, the hoarseness; but the great strain thus imposed on the laryngeal muscles, which are nearly always more or less implicated in the process, invariably revenges itself in the form of greater loss of power and greater congestion of the diseased parts, manifested by more or less complete aphonia, pain, and exhaustion. In not a few cases of professional and of amateur singers, the neglect of this most natural rule for the treatment of every acute inflammation has been the cause of the most obstinate forms of chronic laryngitis and loss of voice. The greatest possible restriction in using the voice is, therefore, to be enforced with all possible energy. In Germany, a much favoured remedy, especially if the feeling of irritation in the throat be much developed, and there be a short but painful cough, is to let the patient frequently drink during the day hot milk and seltzer or soda-water, in equal parts. There can be no doubt that the carbonate of soda possesses the power of dissolving the mucous accumulation, and thus its beneficial effect is easily explained. If the irritation and inclination to frequent coughing be very great, opium or morphia may be safely administered in small doses.

It is thus seen that, for the majority of cases of acute catarrhal laryngitis in adults, the treatment recommended is an extremely simple one, and fully in accordance with the general principles of the treatment of acute inflammation. On the other hand, in accordance with these principles, I consider it a duty to warn earnestly against a premature local application of astringents. Scholars in laryngoscopy often connect the laryngoscopic appearance of congestion of the parts with the idea of making astringent applications. This is a fatal error. No surgeon would dream of treating a recent external inflammation with astringents, which in this stage are only likely to increase the intensity of the inflammation. The same rules, which are to be applied to other parts, must also govern the treatment of laryngeal affections; this cannot be too often repeated, and thus the premature use of astringent remedies is to be considered as a decided fault. The local treatment only comes into play when, in consequence of general neglect, newly acquired colds, feeble constitution, predisposition for diseases of the respiratory mucous membranes, undue talking and singing, the acute inflammation, instead of ending in resolution, passes into a more subacute, or directly into the chronic form.

Before, however, passing to these forms, a few words are necessary with regard to the most severe form of acute catarrhal laryngitis, *viz.*,

the subject. He pointed out in the discussion that, according to the first principles of chemistry, the addition of non-volatile substances, even if dissolved in fluids, could not cause the steam thus arising to become impregnated with them, and he doubted whether the addition of the mechanical principle in the form of the patient's inspiratory efforts and the current of air passing through the liquid would materially alter these conditions: however, he invited me to settle the question by experiment, and this I have done in the following way. A new eclectic inhaler was filled with the usual quantity of pump-water (twenty-seven ounces), to which half-an-ounce of common salt was added (five drops of this solution, when added to two ounces of distilled water and tested by the admixture of one drop of a solution of nitrate of silver, gave ample proof of the presence of chlorides by the formation of a thick white cloud in the pure fluid). The mouthpiece of the inhaler opened by means of an elastic tube into the lid of a second glass vessel, half filled with distilled water (six ounces). A second tube opened into the lid of this vessel, which was, with the exception of these two openings, hermetically closed. The somewhat modified mouthpiece of the inhaler dipped into the water, the second tube led into the air-chamber above the water in the second vessel. A rarefaction of the air above the water in the second vessel, produced by sucking the last named tube in the usual way of deep inspirations (as in a properly conducted inhalation), resulted, of course, in the fact that atmospheric air was drawn and circulated through the entire apparatus thus contrived. This was manifested by the bubbling noises in both the vessels. Having thus secured that the steam mixed with air would pass through the distilled water in the second vessel and here be condensed, I warmed the fluid in the inhaler to the usual temperature of 150° Fahr., and then inhaled through the second tube for five minutes in the proper way. At the end of this time (the usual time for inhalations), the apparatus was taken to pieces, and the distilled water tried by the addition of nitrate of silver-solution, when it was found that it remained perfectly transparent, and that not the slightest trace of a cloud was produced. It is thus conclusively shown that in an ordinary inhalation by means of an inhaler not the slightest trace of chloride of sodium enters the patient's throat; that it is perfectly useless to add salt to fluids inhaled; and that the only artificial way of using salt for the purpose of acting as a local remedy to the pharyngeal and laryngeal mucous membranes is to administer a solution of chloride of sodium in the form of spray. Of course, this will hold good for other non-volatile drugs as well.

the oedematous. (The limited time does not allow me to touch the hæmorrhagic and the purulent or phlegmonous forms, which are, however, exceedingly rare.) It will have been observed that whilst talking of the common forms of acute catarrhal laryngitis, I did not mention the laryngoscope once. Of course, it would not be correct to infer from this omission that I considered its use for the purposes of diagnosing and watching the case as superfluous; on the contrary, I quite agree with von Ziemssen that an exhaustive diagnosis and a complete certainty regarding the progress of the pathological process can only be acquired by the aid of the mirror; but I admit that in many cases of common acute laryngitis in adults, the laryngoscope is not indispensable for diagnostical and therapeutical purposes. It is quite a different thing in the most acute form of laryngitis, viz., the oedematous one. All the symptoms of this fortunately very rare termination of an acute laryngitis—rapid increase of the catarrhal phenomena, burning pain in the larynx, difficulties in deglutition, great respiratory dyspnoea, etc.—are neither sufficient to make the diagnosis a conclusive one nor to give a satisfactory indication for the proper moment for surgical interference. All these symptoms can be quite as well produced by the impaction of a foreign body in the larynx, by a retropharyngeal abscess, by laryngeal diphtheria, and any other disease giving rise to laryngeal dyspnoea, and yet the treatment is by no means the same, at least in the earlier stages of the catarrhal disease. Here *early* laryngoscopic examination is of the highest value. Death might ensue within a couple of hours before any authority can be consulted; and even in lighter cases, if the laryngoscopic examination have been too long postponed, it might be impossible, on account of the increasing dyspnoea, to proceed with it afterwards. Therefore, I repeat, as soon as there is the first symptom of stenosis glottidis, a laryngoscopic inspection must be made. It having been ascertained that this symptom is simply due to an inflammatory oedema of the submucous areolar tissue and of the mucous membrane itself, a very active and energetic treatment must be instituted. I advise that too much time should not be lost with internal remedies and external applications. If the administration of an emetic, and ice externally and internally, blisters and mustard poultices round the neck, fail to give relief within a short time, and if, on the contrary, the symptoms of stenosis and carbonic acid poisoning increase, an energetic scarification of the oedematous mucous membrane of the larynx, especially of the ary-epiglottic folds, ought to be tried with the guidance of the laryngoscopic mirror. This little operation is by no means very difficult nor dangerous, inasmuch as there is, under these circumstances, little fear of doing harm to the vocal cords or other important parts of the vocal organ, whilst at the same time it will, in many instances, relieve the practitioner of the necessity of performing tracheotomy. In the very few instances of oedema of the larynx from simple acute catarrhal laryngitis in adults which I have seen, scarification has been, without exception, successful in checking the progress of the obliterative process. If, however, the practitioner for any reason whatsoever should not feel inclined to scarify, or if this operation should not soon be followed by a considerable abatement of the urgent symptoms, tracheotomy should be performed without delay, as this operation will, in all instances, if timely executed, save the patient's life.

So much for the treatment of acute laryngitis. Of course, still more sharply defined rules could be laid down, and much more could be said about the single remedies and methods to be used; but the limited time does not allow of too great an extension of this paper.

In turning to the subacute and chronic forms of laryngitis, I should like to make, in parenthesis, a statement with relation to a fact which has often struck me, and the correctness of which has been corroborated by several other observers whose attention I drew to the subject. Although undeniably, in most cases, chronic laryngitis in this country, as well as elsewhere, is the outcome of a neglected acute laryngitis, still the chronic affection in this country begins, in very numerous instances, *à priori* in a more slow and torpid form; and a true acute laryngitis, manifested not only by greater vivacity of the subjective symptoms, but also by great active congestion of the larynx and lively red colour of the vocal cords, is much less frequent in England than on the continent. I fancy I have observed similar conditions with regard to pneumonia and typhoid fever; but the scarcity of my observations on these diseases in this country does not allow my making any positive statement to this effect. At any rate, it would be a very interesting task to compare the appearance of the same inflammatory diseases under different climatic and geographical conditions.

To return to our subject: two principles I put at the head of this division. 1. No internal treatment whatsoever will ever cure an idiopathic chronic laryngitis. 2. The laryngoscope is indispensable for the diagnosis as well as for the treatment of this affection. It is not difficult to prove the truth of these two statements. In prescribing anything for a patient, we must, of course, be led by some positive idea as to the

mode of action of the remedy which we prescribe. Now, what is chronic laryngitis? Of course, like any other chronic inflammation of mucous membranes, a more or less extensive tumefaction of the affected parts, due to hyperplasia or dermoid metamorphosis of the mucous and submucous tissues, increase of the connective tissue, enlargement and tortuosity of the small vessels—in short, a more or less considerable, but always positive, change in the histological configuration of these parts. If this be so, what is the supposed mode of action of any remedy—including the natural mineral waters—if internally administered upon these positively changed structures, and what remedy can be supposed to have any action upon them? I do not think that it is possible to answer this question in any way satisfactorily. But, if so, is it not time at last to discontinue the old practice and to proceed to the new one, which is not only empirically proved to be the more successful one, but which may fairly claim to answer all scientific requirements? This the local treatment does, if rationally employed. Its leading idea is, to change the torpid and slow chronic inflammation by the local application of strong astringent remedies into a reactive one, and to watch the course of this until its natural termination into resolution has been achieved. I do not think that anybody can take exception to the *rationale* of this thought. And if this be so, how can one take exception to its practical application, which is rendered possible by the use of the laryngoscope and by the endolaryngeal treatment? And is not this local method in itself of higher practical worth than the internal treatment? Any transfer of a part of the human body from medical to the direct surgical treatment means a decided therapeutical progress, because we have, instead of a supposed and theoretical mode of action, a positive and real one, the effects of which we can control with certainty. Thus everything combines to corroborate my former statement, of the great value of the laryngoscope, not only for scientific achievements, but for the daily practical use of the general practitioner. In fact, in the disease under question, I positively state that the local treatment, with the aid of the laryngoscope, is the only successful one. Of course, I do not deny that in some few cases of plethoric individuals, in which not only the mucous membranes of the abdominal organs but also those of the throat are the seat of chronic congestion, this state could not be materially improved by a rational internal treatment, by the use of the cold sulphur springs, or of Carlsbad, Marienbad, etc.; nor am I unaware of the fact that other classes of patients also suffering from chronic catarrhal laryngitis are greatly benefited by the use of the waters of Ems, Eaux-Bonnes, by a short stay in Switzerland, etc.; but what I maintain is, that all these things do not *cure* chronic laryngitis. If we could induce a merchant suffering from chronic laryngitis, living here in Croydon, to abstain for a fortnight or three weeks from going daily to the City, from talking excessively, smoking many cigars, and drinking a considerable quantity of alcohol, I venture to say, that we would see exactly the same improvement in his voice which is in the majority of cases the result of a visit to any of the foregoing places; but this improvement is in either case but a temporary one, and, at the slightest exertion, cold, excess, etc., the patient's condition will be the old one. A real cure, I maintain with all the authorities who have written on the subject, can only be effected by a methodical local treatment. I need not enter here into a long discussion of my second statement—viz., that the laryngoscope is indispensable for the diagnosis of chronic laryngitis, because its truth is obvious. Not one of the subjective or objective symptoms is in itself, or combined with others, pathognomonic of the affection. Hoarseness, dysphonia, early fatigue, aphonia, cough, augmented expectoration, sensations of dryness, heat, pricking, soreness, etc., are concomitants of almost every chronic laryngeal affection; of neoplasms, nervous disorders, perichondritis, syphilis, phthisis; and there are no positively distinctive features between these symptoms, if accompanying any of these more severe affections. It is therefore useless to enlarge any longer upon this point: where there is no proper diagnosis, there is no proper treatment. Again, it is superfluous to say, that no endolaryngeal treatment can be executed without the aid of the mirror; and it must be a fundamental law for every one wishing to avail himself of this method never to attempt any endolaryngeal interference without the aid of the mirror. The individual differences are so great in almost every case, especially in consequence of the very varying form of the epiglottis, that even the most skilful specialist can never be sure to have poured the solution into the interior of the larynx unless he was guided by the mirror. A simple look on a transverse section of the parts shows that in all probability the brush or sponge, without the aid of the mirror, will either penetrate into the cavity formed by the base of the tongue and the back of the epiglottis, or directly pass into the œsophagus, and only accidentally reach the interior of the larynx. I therefore strongly warn against this way of practising local treatment, which is a more frequent one than would appear. As to the method which I advise, the following is a short outline of it. After having

ascertained the duration of the disease and the positive changes in the larynx, give a doubtful prognosis as to the probability of a complete cure, but tell the patient that the result mainly depends upon his own perseverance. This class of patients—as a rule, men from thirty to sixty—are in the majority of cases extremely careless. As soon as a considerable improvement has followed the treatment—and this takes place even in very old cases comparatively early—they give up attending. Soon, of course, they catch a new cold, the old evil is there as bad as ever, and they go about, and, instead of accusing themselves, ridicule the method and the specialist. I therefore have made it a rule, which I can strongly recommend, to tell these patients at once in plain language what their disease is; what treatment I am going to adopt; that it would be foolish to begin treatment if they did not mean to go on with it; that they must leave it to me to decide when the local treatment can be left off; and that, in the event of their giving up the treatment too early, they must hold themselves solely responsible for the consequences. In answer to the usual question, how long I think the treatment will take, I always mention a somewhat longer period than I myself think it will require. If, notwithstanding this, the patient make up his mind to undergo the treatment, I always, if the progress be a favourable one, tell him after some time that this is the case, and that the treatment will take less time than I thought at first. This diplomatic action has hitherto in my practice always had the desired effect; the patients have remained under treatment as long as it was necessary. I willingly admit that it is a pity that one must thus diplomatise; but, inasmuch as this class of patients, though confiding their health to the physician, seem to take the decision as to the duration of the treatment in their own hands, I believe that this *pia fraus*, which is committed only in their own interest, is quite justifiable. The duration of the treatment itself is so very varying, that I strongly insist upon the importance of being very careful in fixing any definite term for it; whilst, for a sluggish subacute laryngitis, five to ten applications may be quite sufficient, a chronic laryngitis of ten or fifteen years' standing may demand fifty sittings or more. Nor can we fix a certain duration of the treatment in proportion to the duration of the disease; some cases turn out much more obstinate, others much more amenable, than one expected. I have, in one instance, effected a lasting cure in a case of chronic laryngitis of sixteen years' standing in thirty-six sittings, extending over a period of two months; whilst in another case of three months' duration, the same number of applications was necessary before the patient was quite cured. On the whole, I should say, if a patient with chronic laryngitis of several years' standing asked me as to the probable duration of the treatment, that he must be prepared to give about two months to it, but that I could not limit myself as to the exact number of applications. In cases of shorter duration and less developed changes, this time is, of course, to be shortened accordingly; whilst in cases in which there are symptoms of impaired mobility of the vocal cords—either in consequence of concomitant nervous disorders, or of mechanical impediments due to disease of the crico-arytenoid articulation—the prognosis ought to be pronounced as more doubtful, but by no means hopeless.

As to the treatment itself, it must always be borne in mind what its leading idea is. We intend to produce a reactive inflammation and to watch its course. For this purpose, the local application of astringent solutions is necessary, the strength of which must of course vary according to the degree of the pathological changes and to the duration of the disease. In all older and more severe cases, I give, in common with almost all authorities, the preference to solutions of nitrate of silver. This remedy has, in my hands, acted better than anything else. Solutions of 16, 24, 48, 96, 240 grains to the ounce, or, in very old and obstinate cases, even the solid stick, may be used. It is, however, advisable in every case to begin with milder solutions, and only gradually to pass on to the strength which is deemed necessary in the individual case. The sensations produced by strong solutions of the nitrate of silver, especially when the pharynx has been touched by misadventure, are so disagreeable, that the patient is very likely to give up a treatment at the beginning of which he experiences so much inconvenience. In the only case in which I was induced, by the patient's urgent request, to use at once a strong solution (96 grains to the ounce), the patient never appeared again. The irritability of the larynx, however, becomes soon diminished, and stronger solutions may then be safely applied. The event of spasm of the glottis following the application, which seems to be so much dreaded in general, is by no means dangerous. I advise the patient, before making the application, to stop breathing for a second or two altogether, and then to begin again to breathe quite superficially through his nose. His attention being thus diverted, the spasm is almost invariably avoided. Drinking a little cold water relieves, in all instances, the spasm, if it should occur. The applications should be made daily in increasing strength, and of course with

the guidance of the mirror, until a lively reactive inflammation is produced. Then gradually longer intervals and weaker solutions must be applied, according to the individual case.

Whilst, as I said before, a great improvement is generally to be observed, even in very old cases, soon after the beginning of the treatment, it is often very difficult to remove the last traces of the thickening and of the chronic congestion. In this stage, it is well to combine the astringent treatment with the use of electricity in both its forms—the constant and the faradic. The employment of the electric current is of the highest value, especially in those cases in which impairment of the mobility of the vocal cords is present. In these cases, it is sometimes necessary to apply it in both forms directly to the affected parts by means of Dr. Mackenzie's laryngeal electrode; but in the majority of cases, the external application of the constant current to the sides of the larynx is sufficient. In more recent and less severe cases, other astringents, such as perchloride of iron, chloride of zinc, tannin, alum, etc., might be used instead of the nitrate of silver; for instance, in cases of subacute laryngitis, the application of a solution of chloride of zinc (fifteen to thirty grains to the ounce) will be found quite sufficient. If, on the other hand, the hyperplastic process should already have resulted in the production of a well defined neoplasm, an astringent treatment is perfectly useless; the attempt to treat it by caustics is even injurious to the neighbouring parts, and the case belongs to the sphere of surgical interference. Strongly, however, as I am of opinion that every general practitioner should treat an ordinary case of chronic laryngitis in the manner described, I warn him against attempting any endolaryngeal operations with cutting instruments without sufficient skill and practice. I am fully convinced that these cases will always belong more or less exclusively to the domain of the specialist, inasmuch as these operations are decidedly dangerous in inexperienced hands.

In the majority of cases of chronic laryngitis, there is a corresponding affection in the pharynx; in fact, in many instances the disease has only spread by propagation to the vocal organ. In these cases, of course, the pharynx must be simultaneously treated, if there should be a general chronic inflammation similar to the laryngeal affections, by astringent lozenges and by applications of tincture of iodine, tannin, carbolic acid, or iodoform; if the granular form be present, the granulations must be individually destroyed, by the solid stick, by caustic pastes, or best by the galvano-cautery. I, however, advise that the pharyngeal treatment should be begun a little later than the laryngeal, in order to accustom the larynx first to the touch of the brush; and later on, in all instances, the laryngeal application should be made before the pharyngeal, because the latter frequently irritates the part to such a degree that it is impossible afterwards to introduce the laryngeal mirror. If the ablation of an elongated uvula should be deemed necessary, it is advisable to leave this to the end of the treatment; because this latter operation often causes a painful acute angina, and would interrupt, in many instances, the treatment for a week; whilst, if performed at the outset, it would make the patient disinclined to continue a treatment at the beginning of which he experienced so much pain.

I am frequently asked whether inhalations are not sufficient to produce a cure of chronic laryngitis. To this I answer with conviction, "No." They may, as von Ziemssen justly remarks, be regarded as merely an aid to the rest of the treatment; but alone they cure the affection as little as any internal medication. I generally order, during the treatment and a little afterwards, hot soothing, not astringent, inhalations to be used twice a day for five minutes. Compound tincture of benzoin, lupulin, coniin, oleum pini sylvestris, may be added to the fluid. Of the inhalations of the natural mineral waters I will speak afterwards.

As regards general prescriptions, diet, and life, I never treat the affection, with the exception of its being a symptom of general plethora, internally. In this class of cases, of course, I try to act through the intestines. I order the regular use of Friedrichshall bitter water or of some other aperient; if possible, I send the patient, before beginning any local treatment, to Marienbad or Kissingen, etc.; but these cases, as I said before, are but rare exceptions, and in the great majority of cases any internal medication is perfectly useless. Of course, I speak only of the catarrhal form of chronic laryngitis. On the other hand, I most forcibly insist on absolute rest of the voice as far as possible; if any patient tell me, at the beginning of the treatment, that he must use his voice in his profession, I tell him in reply that, in this case, I must give a much worse prognosis. I would not undertake at all the local treatment of anyone who has to use his voice professionally, such as officers, barristers, clergymen, singers, actors, teachers, etc., unless he take a holiday during the time of treatment, and, if possible, for a little longer. It is perfectly useless to attempt a cure if the same mischievous conditions which have most likely produced the disease, *i.e.*, excessive use of the voice, continued during the treatment. As to the general

conditions of life, I advise the patient to wash his neck and chest in the morning with cold water, not to wrap himself up too much in warm neckties, shawls, etc., but to wear flannel underclothing; to take his usual food, with the exception of strong spices, mixed pickles, etc.; to drink claret in moderate quantity, but to avoid heavy beers, champagne, brandy, whiskey, etc., and never to drink spirits in excess, because this of course augments the congestion. I do not order the patient, if he be accustomed to strong smoking, to give this up all at once, because I find that the sudden leaving off smoking generally brings about dyspepsia, loss of appetite, constipation, and other disagreeable symptoms; but I diminish the quantity to two or three cigars daily, and strongly forbid his staying in a room in which many other people are smoking together, because the inhalation of the cold tobacco-smoke acts decidedly more injuriously than the smoking of a cigar itself.

A very good aid towards a lasting cure is the visit to a suitable watering-place, if used at the proper time. I have stated that the use of the natural mineral waters alone will never cure the affection, but I find that, added to the local treatment, they have a decidedly stimulating effect upon the mucous membranes of the pharynx and larynx, and do excellent services in preserving the patient from a recurrence of the affection, to which this class of diseases is unfortunately so very liable. I can recommend especially the warm soda and chloride of sodium springs of Ems, and the salt-water springs of Reichenhall, Ischl, etc., for the purpose. If the patient leave it to me, to choose the proper time for the treatment, especially in very old cases, in which it does not matter much whether the disease is left a little longer to itself, I like to begin the treatment at the beginning of the spring, and to send the patient immediately after its completion to Ems. There I direct him not only to drink the waters, but also to gargle with them and to inhale them; in other words, to continue the local treatment in a somewhat milder form. If his means and time admit, he may then stay for a few weeks in the Black Forest, in Switzerland, at a moderate height (I find the Engadine not suitable for these chronic laryngeal affections), before returning to this country. Such a line of treatment has, in my hands, hitherto, without any exception, resulted in a perfect success. It is quite true that all this does not give an absolute immunity against the recurrence of the affection if occasioned by some accidental cause, but a repetition of the treatment—which is in such cases invariably much shorter—and a renewed visit to Ems are sure to remove the evil again.

In conclusion, I can say that I have had the pleasure of curing several cases of from ten to sixteen years' standing by one course of local treatment, followed by one or two visits to Ems in the same and in the following year; and as the patients come to see me once or twice a year, I have the opportunity of convincing myself that the effects of the cure are lasting. I can thus conscientiously recommend the line of treatment which has been indicated.

NURSING INSTITUTIONS.

By F. T. PAUL, F.R.C.S., Liverpool.

SINCE the question of nursing has come thoroughly under discussion, it will, I think, be the better settled if the systems which are found to answer best in the more important of our hospitals, provincial as well as metropolitan, are made generally known. The immediate point at issue appears to be the system that shall be adopted at Guy's Hospital. Now, as an old student and house-surgeon at Guy's, I am intimately acquainted with, and thoroughly appreciate, the many good features in its nursing. Still the most partial friend must admit there was room for improvement. The nursing depended almost entirely upon the excellent and well-trained sisters, supported, it is true, by a number of very good nurses, but at the same time by an infinitely greater number of bad ones. The nursing staff in my time was most carelessly recruited. The matron seemed willing to accept a nurse without any regard for her character. As an example—an exceptional one, I admit—I may mention that a sister once complained to me that, of her six nurses, five came from the patients in Patience Ward (venereal), and the sixth had three illegitimate children. The training, too, was quite without method. It is true, I believe, that they had a few lectures from Dr. Steele; but it was an absolute matter of chance what variety of cases they saw, and they were quite dependent upon the goodwill of their sister or fellow-nurse for what teaching they might happen to get. Their position, too, was a very menial one; they had to do all the dirty work of a ward-maid, and to scrub the floors. The old matron had been almost brought up at Guy's, and saw no necessity for a change. A new one comes, no doubt one who has been well trained; she sees these imperfections, and, like the proverbial new broom, immediately

upset the whole concern. Had Miss Burt, fortunately for herself and the hospital, consulted with the staff, a result might have been arrived at which would have been equally beneficial to both. Yet, since the matter has been brought before the public, the practical experience of other institutions may help towards a satisfactory settlement.

In Liverpool, connected with the Royal Infirmary, we have not only a medical school, but also a nursing school; and the latter is not so well known as it deserves to be. The Nurses' Home, as it is called, is a large building in the grounds of the Royal Infirmary, containing excellent accommodation for a great number of nurses and the lady-superintendent and her assistants. It is presided over by a special committee—I believe a subcommittee from the Managing Committee of the Royal Infirmary; and its objects are: 1. To teach and qualify nurses in every branch of nursing; 2. To nurse the Infirmary; 3. To nurse the outside public. The relations of the Infirmary to the nursing institution are, that probationers shall be trained in the wards; that the staff, house-surgeons, etc., shall be requested to assist in teaching them; and that, when necessary, the funds of the Infirmary shall be voted for the support of the institution. In return, the Infirmary has the first choice of nurses, and the services of the lady-superintendent and her assistants. The relations with the outside public are, that they pay from one to two guineas a week for a nurse, by which means the institution becomes almost self-supporting, while the public have the advantage of being able to procure at a moment's notice an intelligent, well-educated, and well-trained nurse, suitable for any emergency.

The probationers are required to enter for three years. The first year is spent in hospital training; the last two years usually, for the most part, in private nursing. The main object in requiring three years' attendance is that, having received one year's free training in the Infirmary, during the next two they may become useful and profitable to it. After this, they are entitled to their qualifying certificate, and can either leave to seek their own fortunes, or be placed on the staff of the Infirmary, or become private nurses at a higher rate of wages. The lady-probationers can, by paying fifty guineas to the institution, obtain a certificate at the end of their year's hospital training, and are not required to serve during the two following years like the free probationers.

The medical world have long ago admitted that, from a medical point of view, the services of a well-trained nurse are second only to their own; and, apart from the selfish requirements of any special institution, the best system must be that which diffuses its good services the most widely. As things at present stand, I think there is no better system than that which we have adopted, and which works so well in Liverpool. It offers the fullest opportunities for benefiting the public.

There was a time when at many hospitals, Liverpool among the number, the lay committee would scarcely tolerate students in the wards. Ultimately, they began to see that this was a short-sighted policy; and that they themselves would very likely one day trust their health to the keeping of those whose medical education they were opposing; and it is only now that people are beginning to see that, if they are to be well nursed in their illness, they must make some provision for properly training private nurses. This can only be well done in our large hospitals. The truth of that being admitted, we may justly ask: What greater right has a public institution to refuse to become a nursing school than it has to become a medical school? I do not apply this directly to Guy's; for the question may not have been put to them. But I think that it ought to be put to every important hospital in the country, and, for my own part, I can scarcely see any just ground for refusal.

My intimate knowledge of the working of the Liverpool nursing system is drawn from having held the position of Resident Medical Officer at the Infirmary, and, as far as my experience goes, I consider the Liverpool public, both rich and poor, to be nursed as well as or better than any other section of the community.

What I have said has, I am aware, very little reference to the present deadlock at Guy's Hospital. But such innovations as neglecting the wishes, or ignoring the authority, of the staff; changing the permanent sisters or head-nurses from ward to ward; ordering patients up at five o'clock in the morning, and such things, admit of no discussion, but have only to be known to be condemned by any one who knows anything of hospital management. One can only conceive that Miss Burt, having been very successful in carrying out her ideas at Leicester, and having been greatly patted on the back by such friends as Dr. Marriott, has become a red-hot enthusiast in her own cause. But, that her enthusiasm has so far misled the clear judgment of Dr. Steele, as some of the letters in the JOURNAL infer, I am loath to believe, until he places his view of the question before the public.

Every one must admit that, in the present state of things, an inquiry into the nursing system at Guy's Hospital is called for. If such an inquiry take place and originate a great change, I believe that, if my old Alma