

Essays on ear and throat diseases : ear disease in childhood, ear disease and life assurance, certain peculiar aural and cerebral symptoms, diseases of the tonsils and uvula requiring operation / by Llewellyn Thomas.

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EAR AND THROAT DISEASES.

EAR DISEASE IN CHILDHOOD.

EAR DISEASE AND LIFE ASSURANCE.

CERTAIN PECULIAR AURAL AND CEREBRAL SYMPTOMS.

DISEASES OF THE TONSILS AND UVULA REQUIRING
OPERATION.

BY

LLEWELYN THOMAS, M.D.,

SURGEON TO THE CENTRAL LONDON THROAT AND EAR HOSPITAL; PHYSICIAN AND LECTURER ON THE
ANATOMY OF THE VOCAL ORGANS AT THE ROYAL ACADEMY OF MUSIC, AND AT TRINITY
COLLEGE, LONDON.

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P R E F A C E.

THE articles here published are essentially clinical notes, and have to a considerable extent already appeared in print. They are in the main based on the author's observations in practise, through detailed accounts of cases have been almost entirely avoided, since at best, such reports must always be somewhat egotistical and monotonous.

The paper on Ear Disease in Childhood, will, the author trusts, furnish the busy practitioner with a few useful hints which may enable him to arrest in their incipient stage, some of those insidious forms of Ear affections which when neglected at their outset prove in after life difficult or impossible to relieve.

The article on Otorrhœa and Life Assurance, at the time of its appearance in the British Medical Journal, elicited a very favourable editorial article, and was reprinted in the Insurance Record, and many letters from medical referees, and others interested in Life Assurance, addressed privately to the author, on the subject, assured him of the interest taken in the question and may be held to justify its reproduction. A case has but recently terminated fatally, from Cerebral Abscess, in the Central Throat and Ear Hospital, which well illustrated the dangers attending a chronic discharge from the Ear in an otherwise healthy person.

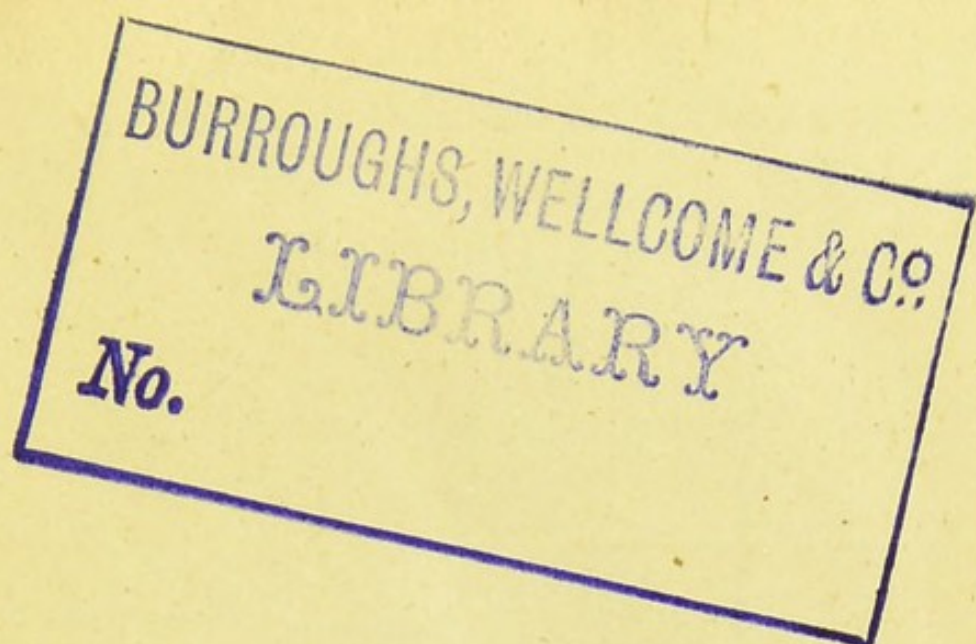
The remarks on Peculiar Aural and Cerebral Symptoms, appeared in a condensed form in the *Lancet*, and may, it is hoped, draw attention to a class of Aural cases which are now frequently overlooked or erroneously interpreted.

The author is aware that he has nothing absolutely novel to suggest in the treatment of Diseases of the Tonsils and Uvula, nevertheless, as considerable uncertainty exists in the minds of many as to the class of cases which are likely to derive benefit from operative interference, he has endeavoured to indicate the conditions probably amenable to surgical treatment. The article has not been written in the spirit of a systematic treatise, but rather as a reproduction of the observations and answers which the writer is accustomed to make to the students and visitors attending his hospital clinique.

LLEWELYN THOMAS.

15, WEYMOUTH STREET,
PORTLAND PLACE,
April, 1878.





ON THE NECESSITY
FOR THE
EARLY RECOGNITION & TREATMENT
OF
EAR DISEASES IN CHILDHOOD.

*(Communicated to the Annual Meeting of the British
Medical Association at Sheffield, 1876.)*

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ON THE

NECESSITY FOR THE EARLY RECOGNITION

AND

TREATMENT OF EAR-DISEASES IN CHILDHOOD.

WHEN a young patient is brought to a surgeon for the treatment of deafness, otorrhœa, polypus, or other chronic aural malady, the almost invariable statement is volunteered, that the parents thought the child would "grow out of it" as it got stronger, and that they had been told that the ears should on no account be "tampered with," and, *mirabile dictu*, I have also been several times assured that, in the case of girls, the friends had been advised that the deafness would probably disappear on the advent of the catamenia. It is hardly necessary to point out that no surgeon would permit such a *laissez-faire* style of procedure with an ophthalmia,

an abscess in a joint, a contracted tendon, or any other infantile deformity or disease brought under his notice ; but the principles and practice of Aural Surgery have, till the last few years, been so generally neglected in this country, as to warrant me in fearing that incipient aural diseases are frequently treated with the most lamentable non-chalance by both patients and their medical attendants. It is probable that a deaf person is a greater nuisance to society than one who is blind or deformed, and on this account alone it is surprising that parents do not recognize the importance of prompt attention to defective hearing in their children ; another fact which should urge them to the early recognition and treatment of deafness in the young, but which is too generally overlooked, is that if a child is deaf in its earlier years, it acquires what may be termed a habit of deafness, the auditory nerve never having been properly developed and educated ; and this without there being any serious actual structural disease ; I have frequently observed that a patient who has been deaf from childhood, and who can hear a watch ticking at six or eight inches from the ear, is far more deaf to conversation than one who has become deaf at adult age, and who can only hear a watch ticking at one inch, or on contact with the cranium,

simply because, in the first instance,* the faculty of discriminating modulations of sound has never been exercised to maturity.

With the exception of those cases where the labyrinth or ossicula have been utterly destroyed and discharged during scarlet fever, or where deafness has resulted from typhus fever, or convulsions, the treatment of deafness in young persons gives most encouraging, and, in some cases, even brilliant results, fully equal to those obtained in ophthalmic or orthopædic surgery.

I am desirous of directing the attention of practitioners to the fact that, at the outset of aural disease, much may be done in arresting, curing, and, above all, in anticipating morbid processes, as the strength of a specialist should lie not in the fact that he possesses knowledge which others have not, but that he has constant opportunities of investigating and treating certain forms of disease, and of watching definite lines of treatment in a number of consecutive and similar cases. I would here quote the words of Dr. Cassells:† —

* I may here appropriately draw notice to the thoughtless and injurious system of allowing young children to practise upon old, worn-out pianos, at an age when the "Musical Ear" is most prone to the reception of bad influences, which may probably never be eradicated.

† "On Conservative Aural Surgery."

“Ear diseases do not of themselves tend towards natural cure, but to become progressively worse, and more serious in their consequences ; and further, that of the diseases of the ear amenable to our art, those alone are preventible and curable which admit of *surgical* treatment.”

It cannot be too earnestly insisted upon, that although in many parts of the body, simple inflammations may result in complete resolution, yet in the Ear from its delicate structure and peculiar *anatomical relations*, the most trifling primary affections always tend to advance into a serious structural disorganization and consequent alteration of function.

In children even more than in adults the key to the treatment of most aural diseases is the condition of the Eustachian tubes. Partial closure of the tubes occurs in the most ordinary catarrhs, either with or without enlargement of the tonsils ; and it is most common for children, especially if in a weakly or scrofulous state, to become repeatedly deaf at every fresh cold, the mother thinking little of it, the hearing fluctuating so frequently, till at last the deafness becomes persistent, or after two or three attacks of ear-ache a slight discharge takes place, with rupture of the drum-head, which, if still neglected, probably leads to a permanent impairment

of hearing, constant otorrhœa, or polypus. Pain in the ear in children should never be overlooked: it always has a *signification*, and is a most important warning of tympanic congestion: the existence of carious teeth should always be looked for, as I have certainly discovered structural changes in the drum-head produced by the sympathetic irritation. True aural neuralgia is very rare, except in *specific* cases: Dr. Roosa states that he has only seen two cases of true Ootalgia.

If the membrane be examined during an ordinary attack of ear-ache, the vessels of the malleus will almost invariably be found injected, and this condition will be frequently associated with more or less Eustachian obstruction and tenderness of the meatus. It may be here remarked, that it is rare to find a patient under fifteen years of age complaining of Singing in the Ear, though it is almost a universal accompaniment of Eustachian obstruction, and Tympanic catarrh in adults.

Closure of the tubes, though frequently most difficult to overcome in adults, is in children easily conquered by the operation of inflating the tympanum. Simple as is this process, it can hardly be designated an operation, it is, considering its great value, apparently but little in *general* use in this country. The patient should be directed to fill the

mouth with water; the nozzle of a Politzer air-bag is placed in one nostril and both nostrils being closed by the fingers of the left hand of the surgeon, the patient is told to swallow, the air-bag is simultaneously firmly compressed with the right hand, and a blast of air is thus driven into the Eustachian tubes. In very young children the water may be dispensed with, as the child generally attempts to cry or utter some exclamation on the introduction of the air-tube into its nostril, thus involuntarily closing the nasal aperture of the pharynx and exposing the Eustachian orifices to the current of air. The result is generally instantaneous and most gratifying to the friends, the child, who was perhaps previously stupidly deaf, now hears clearly, and is often quite frightened at the unusual sounds which break in upon him.

This pleasing change, usually, to the disappointment of the parent, gradually wears off in 24 or 48 hours, and the child may become almost as deaf as before; but, supposing the obstruction to be uncomplicated, a repetition of the inflation three or four times a week will soon overcome it, and the cure will become permanent. Surgical treatment should be supplemented by the use of astringent gargles or lozenges where indicated, and by the

administration of iron, tonics, cod-liver oil, &c. In some rare instances one inflation suffices. In certain cases, where the tonsils are enlarged, they should be removed and inflation of the Eustachian tubes pursued for a short time after the parts are healed. There can be no doubt that one reason why the valuable operation of excision of the tonsils had fallen at one time to some extent into disrepute for the cure of certain cases of deafness, was, because this necessary after-treatment had not been pursued, and the benefit therefore had been but partial, or temporary.

If the child is old enough to understand the method, vapour inhalations of benzole or of creasote and chloroform, are of great assistance in the cure. The patient should be directed, when the mouth is full of steam and vapour to close the nose and mouth, and by Valsalva's simple method of making a forcible expiratory effort, drive the vapour into the tympanum. This treatment in appropriate cases is very valuable for adults, many cases of long standing always finding relief from the deafness and tinnitus for some hours after even the first inhalation, and many others deriving permanent benefit, after several repetitions. In children, if inflation and

inhalations are regularly used, the Eustachian catheter is rarely if ever necessary, which is certainly a matter for congratulation, as its use is not always easy even with adults, and to the patient it is always eminently disagreeable, and in my opinion not seldom harmful and frequently painful.*

A certain number of cases of otorrhœa,—probably about one-fifth—originate in the meatus or outer surface of the membrane, and may be easily cured; but every case of running from the ears should be carefully examined, as a small perforation may frequently be closed by early treatment. If, however, the discharge continue for some years even without the occurrence of caries, it is very difficult to arrest it, as the mucous membrane of the tympanum becomes extensively diseased, the drum-head becomes soddened and devitalized, and a habit of suppuration is established, the discharge repeatedly reappearing after several apparent cures. I may here remark on the frequent use of painful counter-irritations for the cure of otorrhœa, the practice is perfectly useless, and causes unnecessary distress. In fact, there are few cases of ear-disease in which it is

* I am glad to find that my colleague, Mr. Lennox Browne, in a paper on the treatment of post-nasal Catarrh, in relation to deafness, confirms me in this opinion, as the result of his independent experience.

beneficial, warm injections and instillations being of far more service. I am aware that the late Mr. Toynbee was in the habit of blistering extensively for various aural affections, but I have reason to believe that in his later years he in great measure abandoned the practice. Patients frequently come under my notice who have been blistered persistently for weeks, the cause of their deafness being a perforation or a collection of wax.

Any attempt at cleansing the tympanum, or applying any medicament to it, is of little avail without inflation is regularly pursued at the same time. In obstinate cases of long standing otorrhœa, the ear should be filled with some astringent lotion, packed with wool,* and inflated forcibly through the tubes several times: the application is thus effectually carried into every part of the diseased tympanum, the eustachian tubes and the *mastoid*

* The practice of stuffing the ears with wool to conceal a discharge, or with the idea of protecting the affected ears against the cold, is most injurious, and even dangerous, as the most serious brain complications may result from the retention of the discharges, and the constant presence of the matter effectually prevents the possibility of a cure.

I would however advocate the use of wool in the ears when bathing, and especially if the amusement of diving is indulged in, as the sudden rush of the water against the drumhead is undoubtedly productive of mischief and that not unfrequently.

cells, which cannot be effectually done by any other method. This treatment should always be pursued after the removal of polypi or granulations. No attempt should be ever made to remove polypi from the ear with inadequate instruments, such as dressing, artery, or dissecting forceps, as the polypus will, under such circumstances, repeatedly break down, and needless pain and a prolonged operation are the result. There are three instruments which are all useful in different cases: the Lever Ring Forceps, the Wire Loop, and the Polypus Hook; of these the Hook will be found the most useful in general surgery, as with it you can successfully and easily attack a very large polypus or a small flattened granulation. The parents of a child will sometimes express a doubt as to the desirability of arresting a discharge, as they have observed that if the running ceases the child becomes deafer, peevish, and drowsy, and even in some cases they may state that they have noticed that convulsions have under these circumstances occurred. Now this process of reasoning, though very natural, is highly fallacious and dangerous: the phenomena described are curious and remarkable and possess great practical and pathological interest. On the cessation of the discharge a metastasis to the membranes or substance of the

brain takes place, and the situation is a very critical one: the diseased tympanum is of course the exciting cause of this passive meningitis, and the most strenuous efforts should be made to cure this focus of ever-recurring danger: any *sudden* cessation of an Otorrhœa should be looked upon with the gravest suspicion, as it is unnatural; the discharge should *gradually* disappear, as the mucous membrane becomes more healthy.

Disease in the mastoid cells is a most dangerous complication and I cannot too strongly urge the necessity of the early recognition of any threatening symptoms: it is very likely to occur in the cases where the discharge has suddenly ceased or become lessened. If there is the slightest tenderness, puffiness, or redness in the neighbourhood of the mastoid process, in a case where there has been previous Ear Disease, whether in an adult or in a child, the least painful and the safest treatment is to make an incision with a very fine tenotomy knife down to the bone and divide the periosteum for a length of about three lines: this incision may or may not be followed by the escape of pus or serum, but it relieves the tension of the part, and is followed by immediate relief, the patient obtaining sleep which he had been deprived of for perhaps several nights.

Cases of fatal meningitis, cerebral abscess or phlebitis, and pyæmia with very slight warning symptoms are by no means rare after the existence of otorrhœa for a year or two, and probably the cause of many such cases is entirely overlooked. Considering the proximity of the facial nerve to the diseased tympanum, it is surprising that facial paralysis does not more often take place; I have only seen comparatively a few cases in hospital practise though Dr. Tanner states that it not unfrequently occurs in children from this cause.* If there is tympanic disease on both sides, there may be double facial palsy. The occurrence of this form of paralysis, is not necessarily of very great import, though the parents will probably be considerably alarmed: it is produced by an extension of the disease to the bony canal, containing the facial nerve, and does not indicate an affection of the brain, though of course there may be brain symptoms associated with it, which should cause grave alarm; complete recovery often takes place. Paralysis of one side of the body occasionally happens in children with ear disease, and may occur without preceding convulsions or insensibility, and may exist either on the same

* "Tanner's Medicine," vol. I., p. 451.

side as the diseased ear, or on the opposite side. It should be carefully borne in mind that epilepsy and epileptiform attacks not infrequently exist in connection with ear disease, especially in children. Dr. Hughlings Jackson does not admit the usually accepted theory, that these seizures are the result of irritation reflected from the aural disease, but suggests that they are the result of venous thrombosis producing local softening in the cerebral substance.

Purposeless vomiting and persistent headache, especially if in the occipital region are of the gravest import, if associated with ear disease; there is rarely delirium even through meningitis or cerebral abscess be present. A cerebral abscess may exist for a long time without producing very urgent symptoms, or the acute symptoms may pass away; death happens very suddenly in many of these cases without the existence of an abscess having been suspected. A combination of tannic and carbolic acids in glycerine I find the best application in the more recent and uncomplicated cases of otorrhœa, the ear being first syringed with a warm solution of permanganate of potash. Inflation and vapour inhalations should also be employed at the same time, as in the most trifling case there is always some deafness: as a warning, I

may here mention that I have known patients accidentally to rupture a healthy drum-head, while practising Valsalva's method, they having at the same time placed a finger in the ear; the compressed air preventing the outward expansion of the membrane, rupture is the natural consequence. It is probable that in children as in adults, *accumulations of wax* are rarely the sole cause of deafness, as on removal of the wax some deafness usually remains, there being concurrently slight catarrh of the tympanum and obstruction of the tubes. Collections of wax hardly ever occur in a perfectly healthy ear; the cause of such accumulations being the increased heat of the parts which acts upon the consistency of the wax, and the alteration in the blood-supply which affects the normal activity of the ceruminous glands. It is common to find patients, after the complete removal of wax, still declaring that there must be something left in the ears, as, owing to the co-existing tympanic congestion, they still experience an annoying sense of fulness and ringing in the ears, the deafness being only partially relieved.

Persons also frequently apply to have the wax syringed out of their ears, when there is absolutely no wax there, the membrane being clearly visible, and they often appear incredulous and annoyed

when they are informed of their mistake ; syringing under such circumstances is positively harmful. The desperate attempts which are made to clean childrens ears by active nursemaids are also injurious, as the natural wax and particles of the towel are often thus jammed against the drum-head in a firm hardened mass. The removal of foreign bodies from the ear in children is oft times a matter of great difficulty, as the numerous contrivances which have been at various times invented for this purpose will testify ; I will not enumerate the substances which have found their way into the ear, as their name is legion ; but I would urge upon the childs' friends not to attempt the removal themselves, as they are certain to sadly complicate matters. As a rule there is no immediate hurry, as the inflammation commonly seen is always induced by the rough and injudicious attempts at removal, and not by the offending intruder. From considerable experience I think, that unless it is obviously an easy task, chloroform or ether should always be given to children, as the child generally struggles most violently, and much damage may be done by one of its sudden plunges. The surgeon should always assure himself by *vision*, that there is a foreign body, and *then* by *touch* as to its consistence, as the friends can often give no

reliable information: this may appear needless advice, but the malleus when struck by a probe, feels remarkably like a hard foreign body, and I am sorry to say that cases are not unknown, where the small bones of the middle ear have actually been dragged out by violent and reckless surgery. A woman recently brought a child to me at the hospital, stating that she had seen a bead in its ear, and requested me to remove it: the child's meatus was remarkably short and without the aid of a speculum, the drumhead could be plainly seen, though unusually white and glistening; to my amusement the woman did not appear to be half satisfied at my refusing to attempt to remove what she considered to be a bead. As a rule the syringe should be the surgeons sheet anchor in these cases, though sometimes, especially when dealing with softened seeds, rectangular or lever ring forceps may be used, or a wire loop, either improvised or fixed into a handle. Dr. Löwenberg of Paris, extols the practice of removing foreign bodies by means of glue at the end of a stem, left in contact with the substance for about half-an-hour; he also states that a bead thus removed has remained attached to the stem for three years. The surgeon need not hesitate to admit that he has a difficult case to deal with, and may

frequently with advantage, if there is much inflammation, defer the removal to another day, using in the interval anodyne applications. Insects in the ear may be easily killed and dislodged by pouring oil into the passage; the accident of *maggots* in the ears appears to be far rarer now-a-days than in former times, when their occurrence was frequently alluded to by surgeons.

In young patients suffering from hereditary specific disease the surgeon frequently meets with the most destructive, and sometimes with the most insidious and rapid forms of ear-disease; yet if the danger be anticipated, and intelligently watched for, these ravages may in many cases be averted or arrested: the local manifestations may be very slight, yet generally the mischief begins in the throat, and proceeds thence along the Eustachian tubes to the tympanum and labyrinth, and in such cases topical applications and inhalations with inflation and constitutional treatment are often of much service. The changes in the throat and ear usually alternate with or follow attacks of interstitial keratitis; the patient thus being threatened with both deafness and blindness; in every case of specific corneitis the probability of the occurrence of some ear mischief should

carefully be guarded against, especially at the age of puberty.*

In the very destructive inflammations of the tympanum, occurring after the post-nasal mischief in scarlet fever, there is a grand and hitherto sadly neglected field for preventive aural surgery; and doubtless many an ear might be saved, and the most serious head-complications averted, by a timely incision of the membrane, thus providing for the escape of the exudations, and removing the pressure from the labyrinth. Considering the frequency of deafness, and of even deaf-mutism after scarlet fever, too much stress cannot be laid upon the importance of the fact that every practitioner attending a case of scarlet fever, should be as much on the alert against the dangers of possible tympanic inflammation and

* "If taken in the early stages, or when the symptoms first manifest themselves, much may be done by a rapid mercurialisation followed by iodide of potassium, at the same time that the Eustachian Tube is attended to and the tympanum kept free by warm iodide of potassium injections. But when a case comes with extreme deafness (both with the watch and tuning fork) and presenting the characteristic teeth of Hutchinson, and bearing the proofs of an attack of interstitial keratitis, either remote or recent, I have never had a good result from any treatment."

"Remarks on Aural Affections" by Macnaughton Jones, M.D., Surg. Cork Aural and Ophthalmic Hospital.—*Medical Press and Circular*, October 17th, 1877.

brain complications as he is against the generally recognized perils of renal congestion.

I now come to the painful subject of deaf-mutism, and I would quote a most important and remarkable statement made by so careful an observer as Dr. Roosa, in which I entirely concur. "I am inclined to think that there are many more cases of children becoming deaf *after birth*, than of Intra Uterine Deafness." It must be borne in mind that it does not require absolute deafness in a child to produce deaf-mutism, and a child who has at an early age been able to say a few words, may after convulsions or scarlet fever entirely cease to speak, though it can evidently still hear very loud noises. I know of few more painful duties than to be compelled to tell parents, (who have been hoping against hope,) that their child is a deaf mute, and they then frequently refuse to believe the dictum, basing their opinion on the fact that the child's attention is obviously attracted by loud sounds. It is often very difficult to properly test a child's hearing, great care must be taken to prevent the child seeing any motion, or feeling any touch or any vibration in the air, or in the walls of the chamber, as their powers of observation are generally remarkably acute, though to one accustomed to examin-

ing them, the *actions* and appearance of a deaf mute are almost unmistakeable. The most frequent causes of acquired deaf-mutism, are small pox, scarlet fever, syphilis,* measles, *mumps*, and convulsions; the appearances in the ear are very various, though frequently nothing abnormal can be detected: when the child has ceased to speak *voluntarily*, I believe the case to be incurable. A child will often be able to say Papa and Mama, and yet be a deaf-mute, which the parents fail to comprehend, though they have themselves unconsciously begun to teach the child to talk by "Lip Reading." I cannot too strongly urge the superiority of the "Oral Instruction" of the deaf and dumb over the French system of signs, as the unfortunate, is by the first system restored to converse and sympathy with *all* his fellow men, and at the same time, the muscles of inspiration of vocalization and of facial expression are brought into play, the health being improved, and the face losing the stolidity formerly so common in these cases. Intermarriage also with those who

*"Next to scarlet fever, inherited specific disease may be reckoned as the most fruitful cause of deaf-mutism, as it occurs in children who are born with good hearing power. This is owing to the very early age at which these children generally become deaf, and the rapidity with which all hearing is sometimes lost."

Contributions to Aural Surgery, by W. B. Dalby.—*Lancet*, Feb. 10th, 1877.

enjoy all their faculties becomes more probable, as the old custom of deaf-mutes marrying amongst themselves cannot be too strongly deprecated as *most* likely to perpetuate a defect, which is undoubtedly to a considerable extent hereditary. In the report of the Deaf and Dumb Asylum, appears a table with a list of 23 families, consisting of 160 children, of whom no less than 105 are deaf and dumb. I will conclude with an allusion to a case, sent me for examination by Mr. W. Hall Turner, Surgeon to the Deaf and Dumb Asylum. The mother brought me the child, who proved to be completely deaf, and stated that during her pregnancy, she had been much upset by the discordant noises made one day by a deaf and dumb child playing in the adjoining garden; this may be only a coincidence, but it is certainly interesting, and I think it can be hardly doubted that maternal emotions have as much influence on the unborn child as has hereditary bias.

I trust that the great advance which has taken place in Otology during the last few years, especially in Germany and America, will lead to a more rational treatment of ear-diseases at their outset, and that we shall therefore in the future see fewer of those inveterate cases which are an opprobrium, not only to the speciality, but to the healing art in general.

THE
HISTORY OF THE
CITY OF
NEW-YORK
FROM
THE
FIRST
SETTLEMENT
TO
THE
PRESENT
TIME
BY
J. C. CALVERT
ESQ.
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DISCHARGES
FROM
THE EAR
IN RELATION TO
LIFE ASSURANCE.

*(Reprinted from the "British Medical Journal," June 17th,
1876; and from the "Insurance Record, August 4th.)*

THE VESPERAL

THE VESPERAL

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THE VESPERAL

DISCHARGES FROM THE EAR

IN RELATION TO

LIFE ASSURANCE.



AMONG the various, and in some instances vexatiously minute, forms of questions propounded by different Life-offices for the guidance of their medical examiners, I believe, in many cases, the question, "Have you ever had a discharge from the ear?" is omitted. Now, it may be considered that this subject would be included in the general question, "Have you had any complaint not already mentioned?" but, from constant experience among aural patients, I am confident that very few would volunteer any information on the subject, as many people appear to consider a slight running from the ears as a normal and even healthy condition; and, further, were

the fact admitted, many medical practitioners treat otorrhœa with such indifference that they would probably pass the matter by as unworthy of minute investigation.

I propose, therefore, to demonstrate that the subject is one of great importance in the prognosis of the probabilities of a life being "good," and to suggest that, in a doubtful case, the verdict should be held in abeyance until the suspected ear has been carefully examined and tested. I can well imagine the medical referee objecting to make a tedious examination with aural speculum and other tests, in addition to his multifarious professional and secretarial duties, for the ordinary fee of a guinea, or, in some cases, for as little as half a guinea; yet the subject is of the greatest importance both to the office and to the proposer.

The causes of chronic suppuration of the middle ear are acute and subacute catarrhal inflammation, and acute suppurative inflammation of the tympanum, which may result from small-pox, scarlet fever, measles, typhus, diphtheria, pneumonia, ordinary catarrh, the gouty, scrofulous, or syphilitic dyscrasiæ, and occasionally mechanical injuries: the results are polypi and exostoses, disease of the mastoid cells, ossicles and necrosis, meningitis, cerebral

and cerebellar abscess, pyæmia, phlebitis, and paralysis, or even *possibly*, insanity.*

Several medical *confreres* connected with Insurance companies, with whom I have discussed this matter, have observed, that one would be sure to find out the discharge, without putting a direct question, as otorrhœa is only a manifestation of an obviously scrofulous constitution, or that the resulting deafness would betray the patient. Such is not practically the case, as numberless cases of otorrhœa occur in otherwise perfectly healthy subjects, the result of fevers, catarrh, &c., occurring in early childhood; and a patient may have very good hearing with perforations in both drum-heads, and in fact is himself often quite unaware or oblivious of his defect; on the other hand, one ear may be perfectly sound and the other extensively diseased.

* Since first publishing this article, the following very interesting case has been related in the *Lancet*.

"C. D. C., age 26, no insane relations—13 days before admission into Bethlem Asylum, became rambling and violent; after admission was sometimes sullen sometimes excited: 9 months after admission, it was noticed that he had a profuse discharge from the left ear, which he said had been there for months past; hearing was unaffected apparently; ultimately a swelling formed over the mastoid, the patient was now too sullen and dangerous to examine. On the 10th month after admission, 'the abscess was opened under Ether Spray, and he became sane at once,' and was very shortly discharged well."—*LANCET April 28th, 1877*, case reported by W. RHYS WILLIAMS, M.D., *resident Physician, Bethlem Royal Hospital*.

The late Mr. Toynbee* and Dr. Roosa,† the talented New York aurist, have published tables, the one containing the histories of nineteen, and the other of forty cases of fatal cerebral disease the result of tympanic affections; from these tables it may also be seen that death may occur from chronic aural disease at any age, and at any period, however remote from the commencement of the discharge. Mr. Toynbee cites a case, terminating fatally after the existence of otorrhœa for thirty-five years, and Dr. Roosa one after forty-one years. It is thus evident that chronic suppuration may lie dormant for years,‡ and may then be kindled into a most fatal disease, either by some accidental circumstance, as exposure to cold, an injury to the head, a deteriorated state of health, or more commonly by the mechanical results produced by the affection itself, and the neglect of a proper precautionary or curative treatment.

A careful consideration of the anatomy of the tympanum will at once show what a dangerous

* "Diseases of the Ear," p. 345. London: Lewis. 1868.

† "Treatise on Diseases of the Ear," 2nd edition, p. 452. New York: Wood. 1872.

‡ Since this article appeared in the *British Medical Journal*, Dr. W. J. Little has kindly sent me the following important opinion. "My London Hospital Physician experience early brought me in contact with the serious nature of chronic suppuration in the internal ear. At the Briton Life Office, I have always represented that no such case should be given a *probable viability*, *beyond the age of 35.*"

locality it is in which to have a chronic suppuration as a constant inhabitant ; in fact, I am acquainted with no other region of the body which is in relation with such terribly vital parts. The roof of the tympanum is in contact with the meninges of the brain ; the bone is here often thin and porous, or even entirely absent, so that the tympanum actually not infrequently forms a portion of the cavity of the cranium. This is a most significant anatomical fact, and one probably hardly sufficiently borne in mind.

The floor of the tympanum is sometimes bony, sometimes membranous, and, lying lower than the floor of the external auditory meatus and the orifices of the mastoid cells and Eustachian tubes, is often the seat of purulent accumulations in suppuration of the middle ear, which may result in phlebitis of the jugular vein. The inner wall is the outer boundary of the labyrinth, and is in front of the promontory in contact with the carotid artery ; caries in this situation may produce hæmorrhage from the carotid, or suppuration extending through the labyrinth into the cavity of the skull. The posterior wall opens into the mastoid cells, which are bounded internally by the lateral sinus—a consideration of importance in suppuration of the mastoid, or in attempts to remove polypi springing from this locality. Polypi and

exostoses of the tympanum, produced by the irritation of the chronic suppuration, may both prove fatal, either by pressure and caries, or by blocking up the discharge and producing meningitis; the pus in these cases rarely finds its way through the Eustachian tubes, in opposition to what one would at first sight expect, as they are generally rendered impervious by the long continued inflammatory processes. The mastoid cells are generally more or less affected in a suppuration of the tympanum; but at any time a more dangerous affection may be lighted up; either acute periostitis or caries, from accumulation of the discharges, both of which frequently prove fatal from extension to the meninges, especially in cases where the gravity of the premonitory symptoms has not been early recognized and actively treated. Caries of *any portion* of the temporal bone may take place, and is always dangerous, as it not infrequently results in meningitis, abscess, hæmorrhage, or phlebitis. It is not at all easy to determine the existence of caries in many cases, as the probe cannot here be used with anything like the same degree of boldness as in other parts. If a suppuration persistently resist treatment, and especially if it be uniformly offensive to the smell, caries, however minute it may be, of some portion of the bone probably exists: caries

even of the external meatus, from the proximity of the dura mater to the upper wall and of the mastoid cells, may produce meningitis. Pyæmia producing abscesses in other parts of the body also occurs, probably from the entrance of pus or the products of its decomposition into the circulation through the mastoid veins or lateral sinus.

One of the most interesting facts in connection with the subject of chronic aural disease is its connection with cerebral abscess; for, from the published cases of German and English authors, it appears that from one-third to one-half of the cases of abscess of the cerebrum arise from aural disease. This is readily understood, if we consider the intimate connection of the dura mater with the roof of the tympanum, and might be considered alone sufficient to invest the subject of otorrhœa with vital importance. There is usually meningitis in connection with the site of the abscess; but sometimes the membranes are healthy, and even a portion of healthy brain-substance may intervene between the temporal bone and the abscess. Collections of pus are also not at all uncommon in the cerebellum after chronic disease of the mastoid cells; and here occurs another possible source of error in prognosis; the discharge, when investigated, may appear to come from the meatus only, as the

membrane, is seen to be intact, yet there may be in such case caries of some portion of the temporal bone and disease in the mastoid cells, *without perforation* of the drumhead. Such cases are rare, though they are on record. Apparently, no rule can be laid down regarding the danger of necrosis of the different portions of the temporal bone; in many cases, a fortunate hyperplasia takes place around the tympanum, and shuts it off from its perilous neighbours; the ossicula may be discharged, and even the cochlea and labyrinth, without any bad symptoms, beyond the loss of hearing, supervening.

If the perforation in the drumhead be small or blocked up by granulations requiring considerable force to blow air and the discharges through it, the prognosis is more unfavourable than in the case of a large perforation or entire destruction of the membrane, as it is probable that at some future time the exit of the matter will become impeded, with possibly serious results. I trust that the foregoing remarks have demonstrated the importance of investigating otorrhœa in connection with Life Assurance, and I would suggest that no life should be certified as first class or even second class in whom examination indicates a suspicion of caries or the existence or recent occurrence of anything like an inflammatory process.

It should be borne in mind by intending Proposers that any concealment, whether fraudulent or accidental, of any ailment existing at the time of the proposal, may seriously invalidate the value of the policy. Mr. John Messent, the well known Actuary, writes me, that his office considers that "a deduction should be made from the sum guaranteed by the policy, if it can be ascertained that the Proposer had had a discharge from the ear since childhood, and had it at the time of effecting the Assurance."

Dr. Patterson Cassells, in a paper read before the Glasgow Medical Chirurgical Society, mentions a case of a gentleman with ear disease, who was called upon to resign a policy which he had held for ten years, on the ground that no mention was made in the *contract* of Assurance, that he had a discharge from the ear. He had the opportunity given to him to make a new proposal, which he did; but the Directors refused to accept the life on any terms. He was subsequently accepted by another office, with a loading of five years added to his age.

EDITORIAL ARTICLE

ON

OTORRHŒA IN RELATION TO INSURANCE.

(From the "*British Medical Journal*," September, 1876.)

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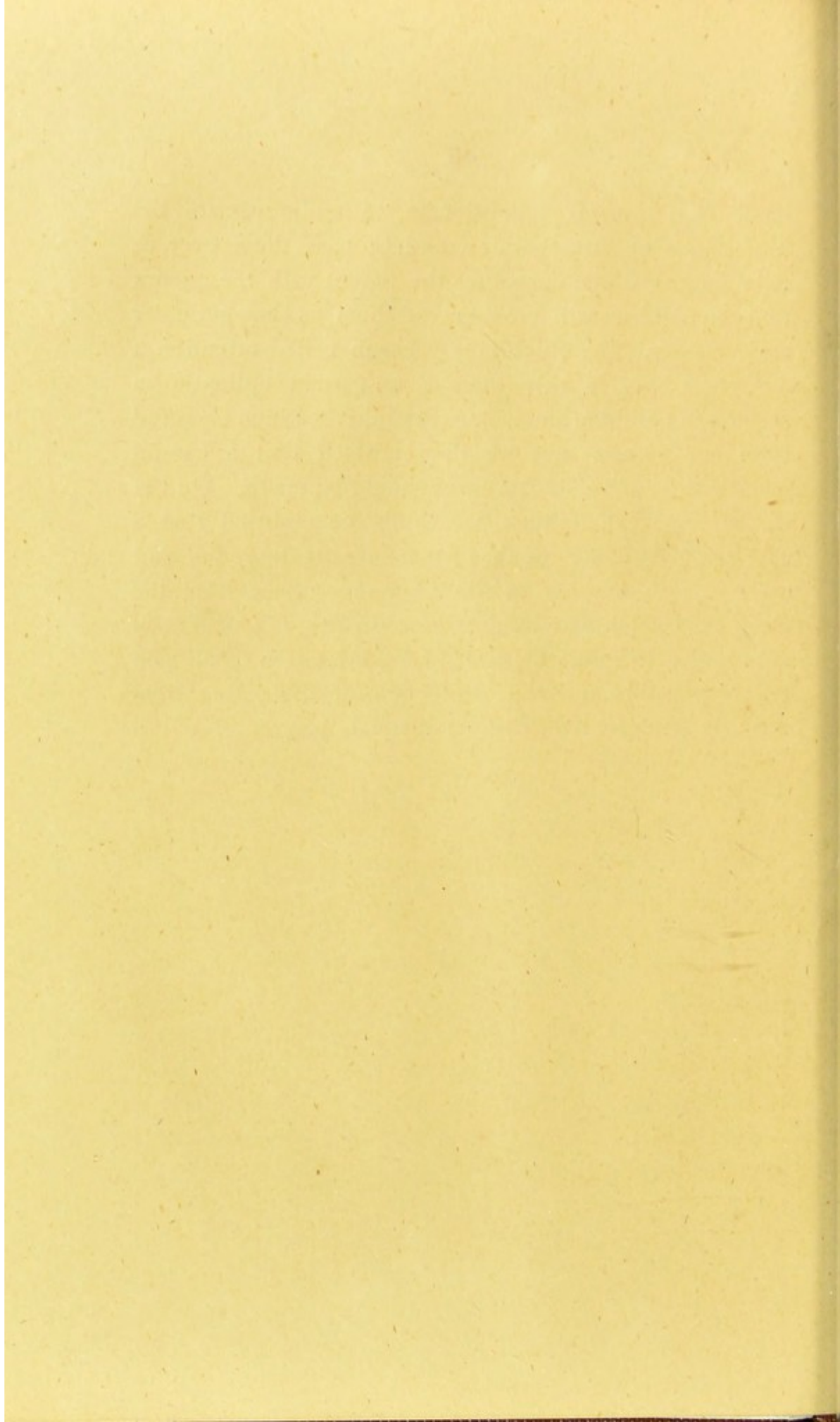
A HINT TO LIFE-INSURANCE COMPANIES.

IN June last Dr. Llewelyn Thomas drew attention, in a paper published in the *Journal*, to the relation of ear-diseases to life insurance; and several other papers have since appeared on the same subject. At first sight, the need of any precaution in a matter apparently so comparatively unimportant seemed doubtful; but subsequent investigation and an actuary's experience have convinced us that the managers of life-offices will be wise if they take steps to insure greater care in the medical examination of candidates, either by adding to their list of questions one bearing on this subject or by specially drawing the attention of their medical officers to the points raised in these papers with reference to the general question of protecting the interests of the public by using all proper means to exclude "doubtful" lives from insurance. Dr. Underhill's suggestion of having a separate private report from the ordinary medical attendant

of the candidate, in addition to that of the medical referee of the district, on the ground that the family doctor is alone cognizant of many uterine and other diseases, and consequently, he alone can give the facts accurately, deserves universal adoption. In the same way, although we are fully alive to the importance of restricting as much as possible the number of questions put to the candidate, we are of opinion, for the following reasons, that it will be wise for the insurance managers to add to their questions one to this effect: "Have you ever had a discharge from the ears? Are you, or have you ever been, subject to deafness or pain in the ear?" Everybody must admit the importance of detecting any old injury or disease which is at all likely to lead, even indirectly, to the shortening of life. With this object, questions are put in insurance forms on every part of the body except the ear; but, for some unexplained reason, this organ has been entirely overlooked both by English and by Foreign offices. The question, "Have you ever had scarlet fever or measles?" is always put, although it is a matter of very slight importance, except with regard to the frequent ear-disease which is left after these fevers, because all other points are covered by separate questions. It has been urged by some that the consideration of otorrhœa is merely the hobby of a few specialists with whom the profession do not sympathise; but many English and German writers have proved by statistics that *one-half* the published cases of cerebral abscess are the direct result of chronic ear-disease. On this point Dr. Roosa

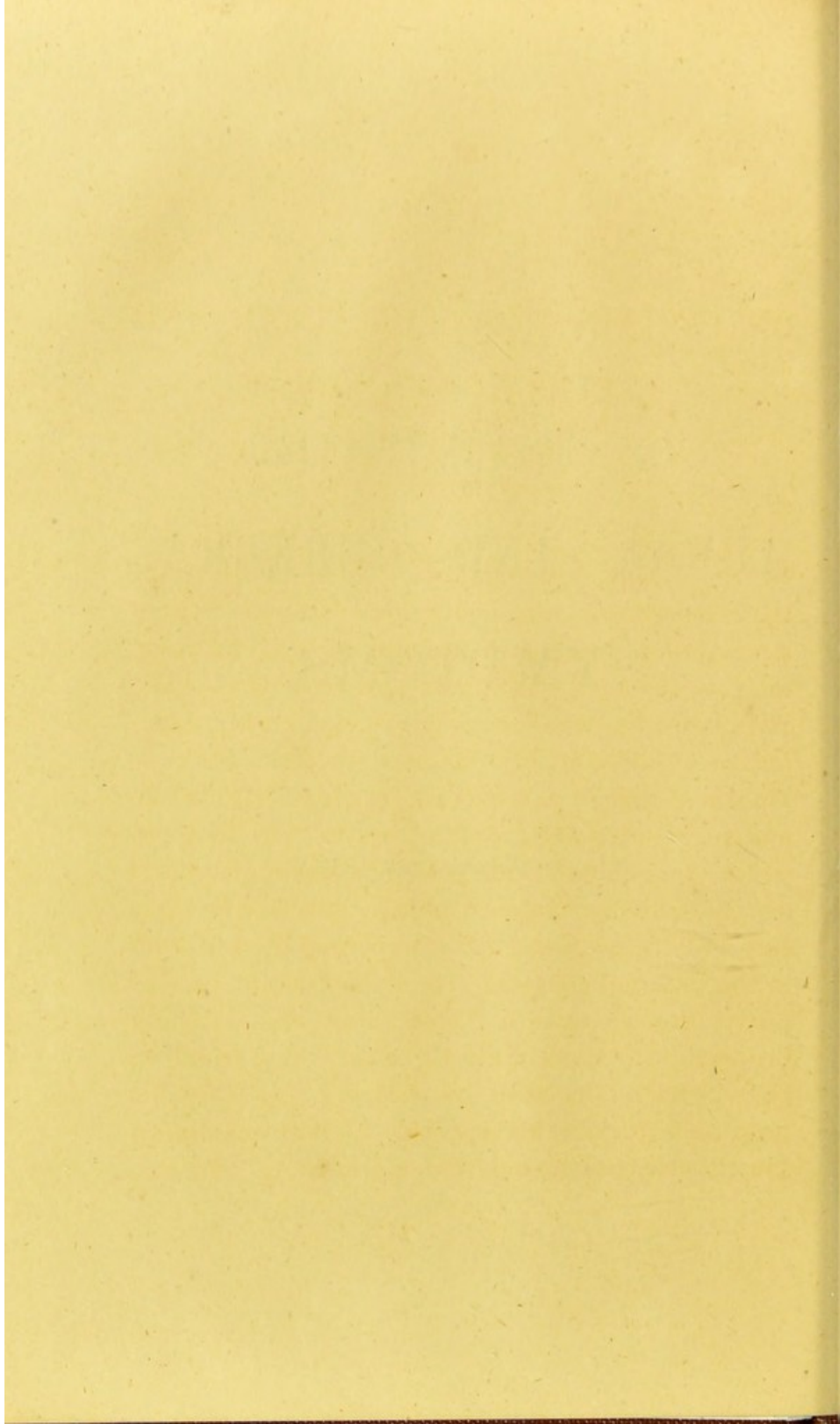
gives 35 cases where the average age was 28 years at the time of death, in which the discharge from the ear had continued for several years; and Mr. Toynbee quotes 16 fatal cases in which the age of the patient was 18 years and upwards, where the average duration of the discharge was fourteen years. It cannot be doubted that the origin of many cases of fatal meningitis is overlooked, as the medical attendant too frequently fails to gain any history of the case when called to a person who has suddenly and rapidly become comatose, and where a *post mortem* examination is quite out of the question, although the cause of death is decidedly obscure. Yet the *post mortem* room can alone satisfactorily reveal the true cause of death, and many pathologists of long standing will bear out the truth of the assertion, that they have found in their own experience more than one or two cases of abscess of the cerebral lobes where ear-disease had existed before death, which was not even suspected during life. It would be desirable that every case of this kind should be carefully noted, in order that the statistics on the point may be made as complete as possible. It is too often forgotten that otorrhœa is not necessarily a manifestation of scrofula and kindred diseases, but that it more often arises from fever, from a blow, or from acute inflammatory injuries. The recent case of a boy (*vide "Journal,"* page 224) who was struck on the ear by a schoolmaster at Liverpool, and who, four months afterwards, shortly before death, complained of a pain in his ears, with deafness, is a case in point. It is too much the

habit with general practitioners to underestimate the importance of ear-affections, and to pass them over as unimportant, whilst consoling the parent with the remark that the children will grow out of them as they get older and stronger. Dr. Hughlings Jackson called attention a few years ago, in this Journal, to certain epileptiform seizures in children, and venous thrombosis, which occurred from ear-disease, and we then advised that a careful investigation of all similar cases should be made. On the whole, therefore, it must, we think, be admitted that a case has been made out for further investigation, and that ear-disease in relation to life assurance, apart from the other evils which may result from otorrhœa, is of sufficient importance to merit the careful consideration of all who are responsible for the protection of life-offices from insuring doubtful lives without adequate precautions.



ON CERTAIN PECULIAR
AURAL AND CEREBRAL
SYMPTOMS.

(Lancet, December 8th, 1877.)



ON CERTAIN PECULIAR AURAL AND CEREBRAL SYMPTOMS.

I HAVE selected the following case to illustrate these remarks, as the gentleman was able to give a much more intelligent account of his sensations than is the case with most aural patients. Mr. H.B., aged 47, was sent to me in September, 1877, for consultation by Mr. Male, of Victoria Park :— He stated that he had been slightly deaf all his life, and had had painful gatherings in both ears in youth : had had no acute pain for sixteen years, but occasionally discharges; tinnitus, worst in the right ear, was always present, accompanied by irritation in the external meatus. He chiefly complained of a sensation as though “something had suddenly dropped or flapped in his right ear,” and which at once appeared to stop his hearing, block-up his nose and thicken his speech. Before examining him it occurred to me from his opening remarks,

that he had possibly a moveable naso pharyngeal polypus.

He referred the sensation accurately to the situation of the tympanum, and said that it would constantly recur for days and then disappear for weeks without any apparent cause : his own words were " it will suddenly fall and alter the whole tenor of my feelings at once, producing great mental depression." He was in the habit of removing the sensation by closing his nose and mouth and making a strong *inspiratory* effort. He stated that if when reading aloud or speaking, the flapping occurred, his voice at once became thick and blurred as the voice of a drunken man. I imagined that this was only an altered perception of the sound of his own voice, but he said that his wife and friends noticed it directly. He suffered in consequence greatly from depression, much aggravated at the periods of the aural movements, and distinctly relieved by strong tea or alcohol: at such times he had a craving for stimulants, and in fear of yielding to this temptation he had wisely given up all spirits and fermented liquors. He had a constant feeling of weight at the vertex, and a general "sleepy sensation" in the head.

On examination, the hearing distance of both ears was for my watch—which should be heard at

about 80 inches—half-an-inch, most distinct with the left; he also heard the tuning fork at about the same distance from the ear, and normally over vertex and mastoid process. The left membrane had evidently been the seat of repeated inflammations, and was thick and fleshy looking, the malleus being undistinguishable. The right membrane was far from transparent, and on telling the patient to inspire forcibly by Valsalva's method, the membrane was clearly seen to bulge out in two sections, above and below the malleus, and he at once exclaimed that *that* was the sensation, though not precisely as felt when it occurred spontaneously; on inspiring, the membrane fell back, apparently moving quite an appreciable distance. The impression given to the eye was like inflating and then exhausting a paper bag. No movements were visible, nor have they ever been felt in the left membrane. I am aware that such movements in a membrane weakened and thinned by repeated inflammations are by no means rare, as I have frequently noticed it before, though as a rule patients are not conscious of any unpleasant sensation; the membrane also frequently looks so thin and brittle, and the movement is so forcible, that I have been astonished that rupture has not taken place.

An inhalation of aldehyde was ordered to be passed into the tympana by Valsalva's method, and chloral and aconite drops to be placed in the meatus. On a second visit at the end of a week, I was pleased and to a certain extent surprised to find my patient tell me that the hearing was better, that the tinnitus was less and the feeling of cerebral oppression considerably removed. The movements in the membrane were again very marked, though the sensations had not occurred spontaneously during the week. The treatment by inhalation—which probably improved the condition of the mucous membrane of the middle ear—with the internal administration of bromide of potassium on subsequent visits, proved so successful that I did not consider it necessary to perforate the drum-head, as I had contemplated doing; the movement, however, never entirely disappeared. That perforation might have been the correct treatment in this instance is rendered probable by the termination of a somewhat similar case occurring in the practise of Dr. Burnett, of Philadelphia,* in which there were *objective* snapping noises in one ear, accompanied by slight movements in the membrana tympani, which entirely ceased on the occurrence of a spontaneous perforation.

* A Treatise on the Ear, p. 446, Churchill, London.

The cerebral symptoms in this case are remarkable, and probably depend upon some alteration in labyrinthine pressure, though it is difficult to determine in what way it is produced ; it should be noted that the unpleasant feeling is diminished by drawing the membrane inwards ; the *hearing* might be expected to be improved by this process, as pressure on a relaxed membrane does improve the hearing power in some cases. Ménière relates the case of a judge who habitually pressed a pin against the drumhead to temporarily improve his hearing : in *this* case pressure applied both with a probe and with an artificial membrane, produced no appreciable results. The rare condition of abnormal patency of the Eustachian tube has some features slightly resembling those described here, and is also temporarily relieved by the inspiratory manœuvre.

Snapping noises in the ear which may be audible, not only to the patient, but also to a bystander occasionally occur, and certain persons appear to possess the faculty of producing them at will, though as a rule they are accompanied by much distress to the individual from their loudness and frequency. This phenomenon has been variously ascribed to contraction of the tensor tympani, the stapedius, or the palatal muscles, and

it is probable that in different cases all these muscles may have been the factors. These snapping noises in the ear must not be however confounded with the common instances of noises occurring during deglutition and swallowing, which in the one case may be produced in the temporo-maxillary articulation, and in the other—in cases of Eustachian catarrh—by the irregular and spasmodic action of the muscles opening the Eustachian tubes.

Sudden sensations of movements in the ear are often mentioned by patients, which are sometimes described as improving and sometimes as impairing the hearing power, and in many old standing cases especially of perforation, the patient knows some little trick, by which he can temporarily improve his hearing, these examples vary however so remarkably that it is extremely difficult to obtain from them really trustworthy insights into the physiology of the Internal Ear. In the somewhat rare instances of collections of serum in the tympanum, the movement of the fluid is sometimes felt by the patient, and can be even seen by the surgeon, in such cases perforation of the membrane should certainly be performed. The subject of ear disease in relation to cerebral symptoms is one of great interest to the physician, as well as the aurist, as probably many cases of

vertigo, bilious attacks (so called), confusion in the head, hypochondriasis and even insanity might be traced to some quite unsuspected ear affection. Dr. Hughlings Jackson considers that almost any kind of ear disease may cause paroxysms of vertigo, and reeling with faintness and vomiting.

Dr. Gowers, in some interesting papers on the diagnosis of Auditory Vertigo, has related several cases, the causes of which might well have passed undiscovered,* had not the physician been on the alert to discover obscure aural symptoms. Dr. Rhys Williams has lately published in the *Lancet* a most interesting account of actual mania dependant on aural disease, the cause of which was only discovered after some months stay in the Asylum, and which was *immediately cured* by an incision into an abscess which had fortunately pointed externally.

Other cases might be cited in which deafness and tinnitus suddenly arose, without any apparent cause, and within a few weeks the patients became

*“ The symptom vertigo has usually little or no apparent connection with its actual cause. Hence its origin is constantly unsuspected by the sufferer. Moreover, there exists frequently an obtrusive association between this giddiness and certain gastric symptoms, which has constantly been and is still frequently misconstrued, and the nature of the disease consequently misconceived by both the patient and his medical adviser.” The Diagnosis of Auditory Nerve Vertigo. *British Medical Journal*, March, 1877.

maniacal ; it must, however, be borne in mind that deafness is a very rare symptom of *intracranial* disease unless *associated* with some lesion of the auditory apparatus.

Aural vertigo, generally called Ménière's Disease, presents itself under many aspects, and its varying phases have only very recently been subjected to the systematic classification and investigation which its importance demands, and even now much of its natural history remains a matter of conjecture.

Vertigo, proceeding from primary labyrinthine inflammation or exudation, unless traumatic, is, probably, very rare as in most cases of so-called Ménière's disease, there is generally some evidence of previous tympanic catarrh, although I have myself seen a few cases of absolute deafness resulting after sudden giddiness or a fall, in which the membranes were perfectly transparent and normal in every respect.

It is probable, judging, from the results of a few autopsies, and from the suddenness of the attacks, that a serous or hæmorrhagic effusion takes place into the labyrinth, but unless it can be positively ascertained that the hearing was previously normal on both sides, it is most difficult to diagnose a primary affection of the labyrinth. The symptoms which would tend to such a diagnosis are the possession of perfect hearing at the date of the

attack, the occurrence of sudden tinnitus, vertigo, nausea or vomiting, unsteadiness in walking, or a complete fall, consciousness however not being lost; hearing on one or both sides much impaired, completely lost, or rapidly becoming annihilated; with the not infrequent statement of the patient of a feeling as though he had suddenly received a blow on the head.

The instances in which the foregoing symptoms are noticed differ only in degree from those occurring where there is some pre-existing tympanic catarrh or otorrhœa, and in these the reflex irritation is doubtless communicated from the middle to the internal ear, and thence to the nucleus of the auditory nerve which is in intimate relation with the origin of the pneumogastric, and thus arise the stomach disturbances which have hitherto so greatly tended to withdraw the patient's and the practitioner's attention from the true cause of the vertigo. It is, however, an unquestionable fact that gastric and hepatic derangements act as an exciting cause of vertigo in cases of aural disease, and in such case the reflex current is simply reversed. Ear cough is produced in a similar manner, and it is possible that some of the spasmodic diseases of children may originate in some unlooked for aural source of irritation.

In vertigo, which does not primarily begin in the internal ear, the deafness is not as a rule very severe, and the symptoms are not so sudden; there is generally tinnitus, dizziness and nausea, or possibly vomiting, the patient may fall, or he will feel as if he were falling, or as if the ground were rising up to him, or as if objects were moving towards him or going round him. In some instances the hearing diminishes during a paroxysm, improves during the intervals, and may be recovered entirely when the attack ceases; here the affection can hardly be in the internal ear, and Hinton suggested that the symptoms might be due to a spasmodic contraction of the muscles of the middle ear, and he also drew attention to the fact that an altered perception of musical notes is a marked characteristic of these cases.

The defects in the hearing power in cases of auditory vertigo are sometimes very slight, and might well escape detection; occasionally, the perception of sounds conducted through the cranial bones is alone deficient, or only the perception of certain sounds may be thus lost, as for example a tuning fork may be heard on the vertex, although a watch is inaudible. The alteration in gait is only noticeable *during* the paroxysms, and the sensations of giddiness which are only vague in

gastric disturbances, are in auditory vertigo definite, with a distinct sense of movement, either subjective or objective.

Cases are on record of mental hallucinations produced by accumulations of wax, and I have frequently seen great depression of spirits* brought on by this cause. Tinnitus occurring in various forms of ear disease is often constant, persisting both night and day, and oft times reduces the patient to a most disheartened and prostrate condition; persons have actually resorted to suicide to rid themselves of this terrible companion, and people have assured me that if they were certain that the "noises" would continue all their lives, that they would certainly wish themselves dead. One interesting case of tinnitus, which fortunately proved very amenable to treatment recently came under my notice. A young and anæmic girl had suffered continually from a pulsating noise in the right ear, and occasionally in both ears, for several months; this noise prevented her from falling

* "Even reflex mental diseases may be cured by proper treatment of the middle ear and naso-pharynx, and in one instance, symptoms of intense headache, sensitiveness of the scalp, and the most melancholic psychical disturbances were entirely and almost immediately relieved by removing hardened blood clots from each external canal, where they had remained for years after a fall, in which hæmorrhage into, if not from, the ear had occurred."

"Burnett, loc. cit." p. 502..

asleep for several hours every night; this was no mere girlish fancy, as her mother who slept with her entirely corroborated her statement. The girl accidentally discovered that pressure with her fingers on the carotid artery arrested the noise, and by this manœuvre she was enabled to go to sleep; but when the pressure became relaxed, the noise frequently awoke her. I found that the faintest digital pressure on the right carotid, as she had already informed me, at once arrested the noise, and was thus led to suppose that there was possibly some small aneurism* of the petrous portion of the carotid. The girl was examined for me by Dr. Fancourt Barnes, with the sphygmograph, but nothing was discovered abnormal in her arterial circulation. Iron and digitalis were administered and in one week the sounds became much less, and soon entirely disappeared, natural sleep being restored. She continued for some time under notice, that she might be sure of the cure, as unhappily few cases of tinnitus so readily yield to treatment. Anæmia whether occurring generally or the result of wasting diseases, undoubtedly

* Professor Moos discovered a dilatation of the jugular vein in the petrous bone of an insane man, who had suffered from distressing noises in the ear, which ultimately drove him to commit suicide.

“ Archives of Oph. and Otol.” Vol. iv. p. 479. 1875.

produces tinnitus and alteration of hearing, which may be morbidly acute or as is more general diminished. A peculiar form of deafness occurs sometimes in females after childbirth, and from my observation it tends to become worse after each successive pregnancy, although no definite disease in the ear can be discovered; this also seems probably due to anæmia induced by the pregnancy or occasionally by hyper-lactation. Anxiety and over-work also induces obscure forms of tinnitus and deafness among women, as is frequently seen in governesses and those who have long watched by a sick friend's bed.

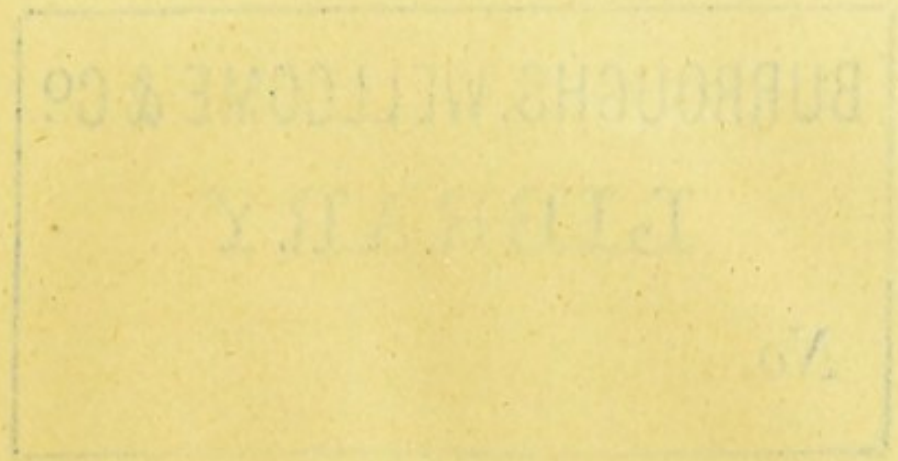
Taste and sensation in the tongue may be altered or lost as a result of purulent otitis media, from implication or destruction of the chorda tympani, this is also noticed if that nerve be accidentally divided in paracentesis of the membrane, though the effect is then only temporary.

Epileptiform seizures, occurring in connection with the coarser affections of the middle ear—whether produced by embolism, by reflected irritation or by irritation of the tympanic plexus—have been alluded to in a previous chapter, but instances occasionally happen of sudden unconsciousness in cases of Eustochian catrrah, accompanied by collapse of the membrane, and here the mechanical

effect of inflation is beneficial, probably by withdrawing the stapes from the fenestra ovalis.

Sneezing, or violently blowing the nose produces giddiness in certain persons, and I have recently seen an instance of this in a girl with long standing ear disease, without perforation, who informs me that if she blows her nose forcibly, the air rushes into the tympanum, and she becomes unconscious and falls forward ; this occurs so suddenly that she is unable to describe her sensations, and she showed me a severe scar produced by a late fall. Such cases are comparatively rare, and are produced either by the pressure of the air on the fenestra ovalis, and fenestra rotunda, or by a sudden spasmodic action of the tensor tympani, increasing the pressure on the labyrinth, and the latter hypothesis, I consider, the most probable, as I have never observed unconsciousness after artificial inflation.

Patients with perforations or polypi sometimes complain of a most distressing symptom inside the cranium, as if cold water were running about under the skull, or as though something alive were creeping along inside the head ; this has appeared to me always a dangerous sign, as it is generally associated with giddiness and headache, and probably indicates some affection of the membranes of the brain.



DISEASES
OF THE
TONSILS & UVULA
REQUIRING OPERATION.

BURROUGHS, WELLCOME & CO.

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tubes, the mouth, the gullet, and the windpipe.

All these parts being covered by the same tract of mucous membrane—differing somewhat it is true in its surface characteristics, according to the function of the several passages which it covers—it can readily be supposed that what may be, primarily, simple local affections, are apt, by their continuance, to spread injuriously to neighbouring parts, and such is really the case.

The fact that the tonsils are in intimate relation on their outer side with the internal carotid artery, accounts for the disturbance of cerebral circulation when these glands are enlarged; and this same relation must be borne in mind in all operative measures, for this vessel has more than once been wounded with fatal results in removing the tonsil with the knife, and aneurisms of the carotid have ere this been opened in mistake for an abscess. The position of the tonsils between the anterior and posterior pillars of the fauces should also be carefully studied, as well as the appearance of these muscles, since they vary so much in thickness and prominence in different individuals, that in some cases it is extremely difficult to isolate the tonsils from them, the free edges of the muscular pillars *appearing* to blend or run into the substance of the tonsils.

The tonsils assist with the other numerous buccal glands in lubricating the mouth and pharynx, probably chiefly during the passage of food; their functions, however, do not appear to be as important as their size and position would lead us to anticipate, yet their liability to morbid influences is far greater than that of other glands, obviously possessing greater functional activity, as for example the lachrymal gland, which is very rarely attacked by disease.

Considering the liability of the tonsils to be invaded by disease it is somewhat remarkable that they are so rarely the seat of cancer. I have myself only seen three instances; Dr. Tanner states that he had only seen one case, and Dr. Cohen, the well-known American Laryngologist, barely alludes to the subject in his work on Diseases of the Throat. The epithelial form which is by far the most frequent variety of malignant disease in the mouth generally, is seldom seen in the tonsil, which when attacked by cancer is usually the seat of scirrhus or encephaloid disease. Nothing can be done by surgery in such cases, except as an attempt to alleviate the discomforts which the patient undergoes; the galvano-cautery offers the greatest prospect of temporary relief without danger, but no attempts

at removal by the knife would be justified, on account of certainly terrible hæmorrhage. Patients with this disease generally complain more of pain in the ears than in the tonsils, and do not as a rule emaciate rapidly, although difficulty in swallowing of an extreme character is the main symptom. Two of the cases, which I have myself seen were both much relieved without hæmorrhage, and with but very trifling pain, by an operation with the galvano-cautery. The one was a case of primary scirrhus of the tonsil, under the care of, and operated on by my colleague, Mr. Lennox Browne, the other was a case of carcinoma of the tongue, extending to the tonsil, which I saw in consultation with Mr. Lloyd, of Bloomsbury. In this case I used the galvano-cautery twice, and with the result that the patient could swallow with much greater ease after each operation. The third case which I was enabled to see at the Brompton Cancer Hospital, by the kindness of Mr. Jeffries, was also a case of primary cancer of the tongue. In both of the secondary cases, the tonsil was at first seen to be quite free from disease, then deposits appeared in the tonsil which broke down, and at last the tonsil became involved in the general mass. This process was well marked in both cases, and the disease did not simply

progress by contiguity from the tongue to the tonsil. In all these cases, the friends of patients should be warned, that although there is no apparent danger of an urgent nature, death may occur very suddenly from oedema of the epiglottis or of some other portion of the larynx, or from rapid hæmorrhage.

Abscission of a diseased tonsil,* is doubtless a minor operation,† but like many other so-called procedures, requires some practice for perfection.

In most text books of surgery it is stated that in aggravated cases of enlarged tonsils, they should be removed either with the bistoury and vulsellum, or some form of guillotine ; that dangerous bleeding may occur, which is to be

* "My experience in the treatment of several thousand cases of Diseases of the Throat, extending over a period of five and twenty years, justifies me in saying, that in the whole range of surgery, no operation is so uniformly successful in its results as that for the removal of enlarged tonsils, or rather strictly speaking, *the removal of morbid growths from the tonsils*, for the tonsils themselves, as has been erroneously supposed, are never removed ; or at least, there is always sufficient of the gland left to perform the function for which it was originally destined, namely, the secretion of mucus to lubricate the food in its passage to the stomach." *Throat Ailments*, James Yearsley, p. 2, 1867.

† The late Professor Syme speaking of the improvements introduced into modern surgery, said "the operation when properly performed in circumstances really requiring it, affords with perfect safety, such an amount of speedy and permanent relief, as justly to merit the title of a substantial improvement in the practice of surgery."

stopped by sucking ice or twisting the bleeding vessel, and that fatal cases of hæmorrhage have occurred. Now these instructions though terse, are not very reassuring or definite to a surgeon, who at the request of the patient's friends has consented to undertake an operation which he has possibly never even seen performed, and I have lately been consulted by a perplexed friend under such circumstances.

The questions to be considered are:—1st, what cases require removal, and what cases are sure to receive benefit from the operation? 2ndly, what is the best instrument to use so as to completely encircle and to efficiently remove the tonsil? 3rdly, what are the after dangers of the operation, such as hæmorrhage, and how are they to be avoided or treated?

Any diseased condition of the tonsils or uvula has a direct tendency to affect, as a rule, both the speaking and the singing voice, either temporarily or permanently, and this result may occur either from the mechanical obstruction offered by the enlarged tonsils, or from the direct or reflex irritation which they exert on the mucous membrane of the various passages surrounding them. The influence on the speaking voice of children is most marked and offensive: the child speaks in a

thick, muffled voice, and in a slow, drawling manner; these results being in many cases prolonged into adult life, and engendering that peculiar tone of voice which gives one the impression of what I cannot but describe as vulgarity, since we all know the effect that is produced upon our judgment by the first tones of certain voices in regard to the refinement and education of the person with whom we are speaking. In public speakers, if any chronic disease of the throat exist, the voice, even though apparently at the outset little affected, soon becomes weak and dissonant if exercised for any length of time, and the speaker experiences a distressing sense of fatigue, whilst the audience fail to catch his words at the natural distance.

If the enlarged tonsils grow upwards and backwards, thus interfering with the action of the soft palate and blocking up the posterior nasal apertures, the voice becomes afflicted with a nasal twang, which should not be described as the result of "speaking *through* the nose," since the vibration of the air in the nasal cavities is really prevented. In this condition it is very often believed that the patient is suffering from polypus or ulceration in the nose, as the nostril always feels stuffed up, and there may be also a constant discharge.

A young lady, aged 15, was recently brought to me with a most disagreeable voice, and an offensive and irritating nasal running; treatment had for some months been entirely directed to the nose, on examination I found that both tonsils were enormously hypertrophied, quite blocking the posterior nares. They were at once excised and I recommended that treatment for the nose should be deferred to a future day: to the surprise of the friends no further treatment was however required, as the discharge ceased and the voice became almost natural in a fortnight.

The influence of chronic affections of the tonsils on the singing voice is worthy of the most careful consideration, as on a medical opinion may depend the choice of a future career.

One attack of inflammation of the tonsils is always a serious matter for a singer, as it is liable to lead to chronic weakening of the surrounding mucous membrane and to thickening of one or both tonsils, which tend to contract the compass of the voice and decrease its richness, with the possible loss of two or even three of the higher notes. The singer is unable to sing for any length of time with comfort or brilliancy, and feels that the voice is muffled. If the uvula be also affected, there may be repeated attacks of hoarseness

from extension of the congestion to the larynx and vocal cords. In cases where the tonsils encroach much on the pharynx the sense of fatigue is probably produced by the efforts of the palatal muscles to drag the tonsils out of the way, especially in the production of the higher notes.

There is a great objection on the part of most singers to submit to any operation on the throat, and the feeling can be easily understood, yet many most eminent singers* have undergone the operation with the greatest advantage to their voices. One of the most successful of the Royal Academy pupils consulted me last year, much depressed in

*"For the consolation of those who suffer from enlarged tonsils and are deterred from having them removed by fear of the voice being injured, it may be mentioned that many of our greatest singers, from Madame Patti downwards, have undergone the operation with the greatest comfort to themselves and with the result of increasing rather than diminishing the range of the voice."

"*Medical Hints on the Singing Voice*," p. 30, by Lennox Browne.

"In 1849, Miss Louisa Pyne came to me in great distress of mind from the loss of her voice, arising from the condition of her throat, which, for a year or two, had troubled her, and which then appeared so hopeless of remedy, that she had resolved on *relinquishing her profession*. The tonsil on one side was enlarged, and the mucous membrane in its vicinity in a state of congestion. From large experience in similar cases, I could at once charge the diseased gland with much of the annoyance to which my young patient had been so subject. All thickening was removed by the knife, and from that day she improved in health; the throat assumed a healthy appearance, the voice regained its power and improved in quality, in the latter respect to such a degree that its equal has rarely been met with."

Yearsley, loc. cit., p. 100, 1867,

spirits, as she was unable to sing without daily increasing fatigue, and was constantly becoming hoarse; her tonsils were greatly enlarged but she refused to allow any operation as several friends assured her that she would if operated on, lose her voice. She ultimately returned to me and said that it was impossible for her to continue singing in public, and that therefore she would submit to any operation, but at the same time expressed her conviction that she must abandon her profession. She was, however, able to accept and fulfil a public engagement within twelve days of the operation, and has subsequently and with great success carried out many most arduous London and provincial engagements.

Slight affections of the ear in connection with a diseased throat frequently cause a singer to "sing flat." The origin of this is generally overlooked, the individual being also not infrequently unaware of the defect.

The evil results produced by diseased tonsils are most marked in childhood, and are the more important as they have such a serious effect on the child's after life, and they may be enumerated as follows:—

Deafness from eustachian catarrh and obstruction, possibly leading to tympanic abscess; impaired freedom of the passage of air to the lungs;

defective nasal respiration, causing the child to snore, to sleep with the mouth open, and the rest to be uneasy and disturbed ; in bad cases it may be broken by alarming paroxysms of dyspnœa. This interference with the functions of respiration stunts the general growth, and prevents the due development of the chest and expansion of the lungs ; nor are these imaginary evils, as it is common to find in a family that one or two children who suffer with enlarged tonsils are smaller and less developed than the others, though they may be actually the elder. In such a case it will be surprising how after an operation they will regain their health and rapidly pick up their arrested development.

Chronic enlargement of the tonsils is mentioned by Dr. Walshe as a cause of "acquired collapse of the lungs."*

As previously mentioned it is also probable that the pressure of enlarged tonsils acts injuriously on the circulation of the blood through the brain and thus interferes with the general physical development. The digestion and appetite are both impaired by the constant swallowing of the morbid and often offensive secretions from the tonsils, and the passage of the inspired air over this diseased surface hinders healthy aëration of

* "*Diseases of the Lungs*," Dr. Walshe, 3rd. Edition, p. 320.

the lungs. In many neglected cases, especially where there is deafness, the countenance is quite characteristic, from the mouth being always half open, by which it acquires a dull vacant expression quickly disappearing after operation if proper attention be paid to the organs of hearing. Distressing cough is often present especially if the uvula be also relaxed, and a so-called "weak chest" might often be remedied by due attention to the throat.

The influence of these glands on the health of children is certainly frequently overlooked, and I constantly see cases which have been attending for months at various Hospitals, taking pints of iron mixture and cod liver oil without benefit, which rapidly pick up strength and development after the operation, and lose their coughs and colds equally expeditiously. In private practice I also often meet with children who have undergone a course of homœopathic medicines in the unavailing hope that these masses of new and diseased tissues may be thus painlessly melted away.

There appears to have existed some years ago—before aural surgery had received the scientific research and investigation which it so seriously demands—an idea that the mere fact of removing portions of the tonsils or uvula would have some

mysterious effect in the treatment of deafness. This reckless procedure of necessity tended to bring these operations into discredit and even encouraged some writers to go to the other extreme and condemn them altogether, unfairly basing their opposition on the unsuccessful cases which came under their notice without considering whether there had been any reasonable ground for undertaking the operation at the outset.

These operations have been performed says Mr. Toynbee* in every possible variety of deafness, from cases where the disease has evidently been in the brain or labyrinth, or where the nervous system of the ear has partaken of the general debility of the system, down to those of hypertrophy of the membrana tympani; indeed, it was only requisite for a patient to be deaf, in order to secure the excision of his tonsils, or some part at least of his throat being cut.

Mr. Harvey, who enjoyed a considerable reputation as an aurist, violently and indiscriminately opposed any operation on the enlarged tonsils, but he argued as though it were supposed that the tonsils were the sole cause of the deafness, and that their removal, *per se*, was expected immediately to restore hearing, without any further treatment. Mr. Harvey also conjured up many chimerical

* *Medical Times and Gazette*, 1853.

evils, as the result of operation, which I can honestly say I have never witnessed among the several hundred cases on which I have operated.

Operations for removal of diseased tonsils should never be performed with the intention of remedying deafness, without first ascertaining that the hearing can be improved by inflation or other less severe measures.

As a case in point, a child of four years was recently brought to me from the country, and the parents requested me to do some operation on the tonsils as the child could not speak; I found the tonsils certainly much enlarged, but the child was also suffering from infantile paralysis, and I believed her to be also an idiot; she was not deaf, but had never even said "mama." I refused to interfere, and sent the case to Dr. Langdon Down, whose experience in such cases is well known. Dr. Down confirmed my opinion, and informed me that the child's want of cerebral development would prevent it ever uttering more than a few words. Had I operated in this case the child's physical condition would probably have improved, but the parents would have naturally also expected some attempt at speech as a result, since they refused to consider the child an idiot, its manners and appearance being very pleasing.

The flattened tonsils* of French authors, which project backwards into the pharynx and between the pillars, are also a fertile source of trouble especially as a cause of deafness, yet they frequently escape detection. Much trouble has been taken to prove that enlarged tonsils do not directly block up the eustachian tubes, this is undoubtedly true anatomically, but they push the soft palate upwards and backwards and thus press the anterior lip of the eustachian tube against the posterior. They also—if not actually themselves, constantly the seat of acute inflammations and abscesses—serve to keep up chronic congestion of the pharynx in the neighbourhood of the eustachian tubes, and in addition prevent the normal action of the muscles of the soft palate, so important for the due performance of the functions of these tubes. Enlarged

*“Une disposition plus grave encore que prennent ces corps glandulaires, c'est leur développement d'avant en arrière, de manière à écarter les piliers du voile du palais. La dureté d'oreille accompagne presque toujours les glandes aplaties qui tendent plutôt à s'enfoncer dans les chairs, qu'à faire saillie dans l'arrière-bouche. Difficiles à atteindre avec le bistouri, elles se dérobent encore plus aux nombreux instruments inventés pour faciliter les *manœuvres des chirurgiens expérimentés*. J'ai eu occasion de voir beaucoup de personnes qui en portent de semblables ; leur surdité, presque toujours rebelle aux traitements ordinaires, ne guérit qu'après l'opération par laquelle je débute toujours quand elles y consentent.”

Recherches Pratiques sur les maladies de l'Oreille, par Deleau.

tonsils may be generally described as a disease of infancy and youth; it is probable also that some infants are born with diseased tonsils, and though I am not quite sure on this head, it is certain that within a few weeks of birth in scrofulous and weakly children the tonsils may be so enlarged as to seriously interfere with respiration. The first catarrhs of infancy often result in enlargement of these glands, and this hypertrophy becomes later a fixed disease on the advent of scarlet fever, or measles. The eruptive fevers commonly leave the tonsils congested and very liable to repeated attacks of inflammation, and it is in such cases where constant colds and throat attacks occur in childhood that so much valuable time is wasted in attempts to cure the diseased glands by medicine, gargles, and caustics.*

*"When the disease is recent and the enlargement is soft, this (local) treatment may prove serviceable in some cases; but more frequently, even under these circumstances, the effect of the applications has been in my experience, *to increase, rather than to diminish the morbid growths*; and when induration has occurred, as the result of a deposition of textural matter, the employment of any or of all the ordinary topical measures will prove entirely futile. Consequently for a number of years I have been accustomed to practise excision in the treatment of enlarged and indurated tonsils, whenever this operation could, with propriety, be performed."

On diseases of the air passages, by Dr. Horace Green, 4th Edition, New York, 1858.

The chief predisposing causes of chronic enlargement of the tonsils are the strumous diathesis, and hereditary specific disease; and to a certain extent the influence of youth must be taken into consideration, as it is before adult life is reached that tonsillar diseases are most frequent, and it is in early life that the glandular system is in its greatest state of activity and therefore most prone to the reception of disturbing influences. The strumous diathesis is a most important factor in the production of enlargement of the tonsils: and in scrofulous children who are constantly suffering from derangements of the cutaneous and mucous surfaces, with ophthalmia, styes, ear-ache, enlarged cervical glands, and catarrhs, it will nearly always be found that the tonsils are enlarged, and this enlargement will probably do more harm to the child's general health and nutrition than any or all of the other complaints.

The exciting causes of enlargement are climate—especially the English climate with its constant variations of temperature—and cold in its many forms whether producing constantly recurring catarrhs in the throat or acute tonsillitis (quinsy) with or without the formation of pus. Influenza and the eruptive fevers, smallpox, scarlet fever, and measles; the two latter are

particularly active factors of this affection, and in the case of children who are not obviously scrofulous it is the common remark of the parents, that the child was quite healthy and had nothing wrong with its throat or breathing till it had measles or scarlet fever. On the other hand most observers agree that scarlet fever, and it may be added diphtheria, are much more serious and fatal when occurring in patients who are the subjects of enlarged tonsils. Dyspepsia is also a common cause of an irritable inflamed pharynx with tonsillar disease, while diseased tonsils often produce stomach derangement, with loss of appetite and nausea, through the agency of the diseased and offensive secretions poured out by the affected glands.

The hypertrophy of the tonsils, frequently resulting from specific ulceration, should never be operated upon, as it will always yield to treatment, but if it is known that the tonsils were previously diseased, they should be excised when the ulceration has healed, as otherwise the throat will be constantly liable to severe specific manifestations.

No operation on the tonsil should be undertaken during the existence of specific ulceration, however urgent the symptoms, or the result will be a large specific sore, very difficult to heal.

A case of this kind occurred to me lately, a young man who had consulted me three years ago for enormously hypertrophied tonsils, which he refused to have operated on, was sent to me for a recent attack of specific ulceration by his private attendant; he was unable to swallow anything but liquids, was in great pain, and had swelling and stiffness in the neck; he now begged me to remove them, or do anything to relieve him, but I was compelled to wait for several days till the ulceration had been healed by nitrate of silver. They were then excised, to his immense relief, and he now states that he has not felt so comfortable in his throat for years.

The cases likely to be benefited by an operation, are probably much more numerous and varied than is generally recognised in England, though American and many Continental surgeons are fully aware of the fact that it is not by any means the largest tonsils which produce the most trouble, especially in adults. One of the most troublesome forms of throat affection with which I am acquainted, is that produced by the small irritable looking tonsil, with small pellets of cheesy looking matter exuding from the crypts *occasionally*, and associated with a relaxed condition of the pharynx. These tonsils are frequently to be seen in the cases of so-called "clergyman's sore throat."

and at the first glance into the throat, the tonsils may not appear much in fault, but if the finger is pressed gently on the root of the tongue, so that a slight effort at vomiting is produced, the tonsils will at once be brought prominently into view: their removal in such cases, braces up the whole mucous membrane, removes a focus of disease, and arrests that constant desire to clear the throat which had previously been a source of annoyance and distress in public speaking. I operated last year on a clergyman, whose congregation had subscribed to send him home from Melbourne, for treatment of a throat affection; after the operation he took six months duty in England to test the result, and on his visiting me previous to his return, he assured me that the impediment in the throat had in no way since troubled him.

Polyps of the tonsils are occasionally met with, projecting from one of the crypts; they are of little importance and are probably the result of some previous attack of tonsillitis; they occasion a slight feeling of discomfort with perhaps an inclination to swallow somewhat frequently. I have removed them by drawing the growth out of the tonsil and dividing the pedicle either with scissors or the wire loop: there is no hæmorrhage and as a rule no recurrence.

Calcareous concretions may be found in the various buccal glands and in the tonsils they frequently resemble the growth of coral, having a branched arrangement : they occasion generally some inconvenience in swallowing and are sometimes to be felt projecting beyond the surface of the tonsil : they may be simply withdrawn with forceps, but generally an incision must be made to allow of their removal, or if the tonsil is much diseased it may be the simplest plan to remove the affected mass containing the calculus. Cysts in the tonsil with fluid or cheesy contents are met with in the tonsil ; they are apt to refill after incision, should this happen, the blade of the guillotine should be passed through the middle of the cyst, and the nitrate of silver applied to the exposed surface.

It occasionally happens that in cases of cleft palate there is considerable enlargement of the tonsils, and in such cases Mr. Francis Mason,* with great reason considers "that their removal is very desirable, because they hinder the prospect of union."

With regard to the second question, how may the enlarged portion of the tonsil be best removed ? There are several methods, three of

**On Hare-lip and Cleft Palate*, p. 77, Churchill, London, 1877.

which I have employed myself and only one of which would I again advocate for general use. A very large tonsil may be removed at one sweep with a curved bistoury, but this implies that the gland should be first fixed, and drawn forwards, either by hook or vulsellum forceps, which procedure necessitates the use of two instruments; generally several repeated cuts are required, and the operation may be complicated by possible dangerous wounding of arteries or muscles. It is to be hoped that few Surgeons still use the bistoury, for it cannot be considered otherwise than a barbarous and cruel method in view of the expedition and safety of the more modern method by means of a simple guillotine. Dr. Turnbull of Philadelphia, well remarks in his able work on "Diseases of the Ear," when describing what must frequently happen to the unfortunate patient when subjected to the bistoury, that "in operating with the knife, the child sometimes tears himself loose after the section has been begun, with a scrap of tonsil hanging down in his throat."

Destruction of a diseased tonsil or uvula by any powerful caustic, always of necessity applied at repeated sittings, cannot be too strongly deprecated in the interests of the patient, and I am sure no patient would submit to such a procedure

if he knew the incompleteness of result, and the pain and tediousness of the process as compared with the accuracy and trifling in convenience or pain produced by the operation he probably so much dreaded.

Attempts have been made to reduce the size of the tonsils by injecting* various fluids into their substance, another measure which can be only described as most unsatisfactory in every way.

Electrolysis has also been brought to bear upon the tonsils, with but small success. Dr. Cohen of Philadelphia, in his work on Diseases of the Throat says that a number of operations—ten to twenty—are necessary, for the removal of the glands by electrolysis and in some of his cases the results were not worth the trouble of the performance.

* I find the following advice given in the "correspondence" of the *Lancet* June 27th, '72.—for the treatment of enlarged tonsils. "The method of procedure is as follows. Get the patient's throat into a quiet position for operating by *repeated examinations*; lay hold of the tonsil by a pair of long well biting forceps; pull the tonsil gently across the fauces; inject by means of a hypodermic syringe one or two drops of perchloride of iron solution. The forceps should be applied to the edge of the tonsil and the syringe inserted a quarter of an inch from it. The injection may be repeated in three or four days. Irritation is set up in the tonsil, followed by condensation and shrinking of the tissue."

Surely this is a painful, tedious and distressing mode of treatment for the unfortunate patient and I know it to be very inefficacious in its results.

Another method of removal by the galvano cautery wire loop, (which is eminently valuable in many somewhat similar cases), may be here dismissed as being unnecessarily cumbersome and not so accurate in its results as the guillotine: the same may be said of the wire ecraseur, except in those very rare cases in which the tonsil is so large that it cannot be embraced by the guillotine.

Complicated guillotines, which attempt to do too much and to supplement the skill of the Surgeon are to be avoided, since the Surgeon should trust to himself and not to any automatic action of his instrument. These guillotines have three distinct actions, all of which must be in perfect order or the operation is a failure. It must be also remarked that the instruments have to be "set" according to the amount of the tonsil which it is considered necessary to remove; they also require most careful cleansing and have to be separated into many pieces, as a particle of blood or rust stops their working most efficaciously.

There are many varieties of more or less complicated guillotines, French, German and American, which it is unnecessary to specify by name.

I now come to the description of a simple

guillotine,* by which, if its action be well understood, one is enabled to perform an elegant and perfect operation almost without possibility of failure. It consists of two blades, running upon each other, the lower is grooved, and constructed with a ring at the extremity for the reception of the tonsil, while the upper or cutting blade, is pushed along the groove by the *thumb* of the operator : a roughened handle six inches in length, is inserted into the lower blade at rather more than a right angle. Some instruments are made with a changeable handle, so that both tonsils may be operated on by the *right hand*; I believe this to be quite unnecessary, as a loss of time is incurred in changing, which gives the patient, especially a child, time to become unruly ; any surgeon whether ambidexter or not, can in reality easily push the blade down with his left thumb, such action not requiring any special delicacy of touch.

* "A writer in the *Revue de Therapeutique Medico Chirurgicale* gives a strong preference to the employment of the guillotine over the bistoury, because of the inutility of the removal of large portions and the less liability to accidents. In support of the necessity for operating speedily in certain cases, a melancholy instance is given from the practise of the writer in which the patient, a girl of sixteen years, suffering from angina with great enlargement of tonsils, literally *died from asphyxia*, from excision being deferred, at the instance of a colleague, *who thought hæmorrhage* would be very severe and that the case would speedily get well if left alone."—Editorial article, *Lancet* April 3rd, '75.

An instrument has been devised with two guillotines united, to remove both tonsils at once; theoretically, this is an improvement, practically, it is not so, as it is rare to find both tonsils equally enlarged, and it is also almost impossible for the assistant to make them project into the throat an equal distance simultaneously. It is also possible to do the operation so rapidly on alternate sides, that the patient has barely time to close the mouth between the removal of the instrument from the one side and the re-introduction on the other. With regard to the operation, it is quite unnecessary to give an anæsthetic even in the case of the most unruly child, *provided the parents leave the room*. In Erichsen's Surgery p. 569, it is stated "in performing this operation it is best for the Surgeon to stand behind the patient, more particularly in excising the right tonsil, as he can thus look better into the mouth and have more command over the head." This is also unnecessary, and another waste of time, and I cannot understand why it is more necessary for the right than the left tonsil? If sun light be employed both tonsils can be seen equally well; with light reflected from a mirror on the forehead, which is both more convenient and certain, both tonsils can be still better observed.

The great secret of the operation, which does not

appear to be generally recognised, is to have the patients head *immovably* held by an instructed assistant, who may be either a hospital porter, a nurse, or one's own servant, who should firmly press with the middle finger on each side *behind the angle* of the jaw, so that the tonsil is made to project into the mouth, and any required amount of the tonsil may be thus removed without danger of wounding the soft pillars. This manœuvre obviates the use of the complicated forks of the Continental and American guillotines, or the painful drawing out of the tonsils by the vulsellum forceps or hook. In the case of very unruly children it is occasionally necessary to introduce the index finger of the disengaged hand to fix the instrument and feel that the tonsil is really projecting through the ring, and the tonsil may then safely be removed without even seeing it. Immediately the section is made, the guillotine is removed in the horizontal position, bearing the tonsil with it, which should be rapidly disengaged and the instrument, if necessary, re-introduced before the patient has time to close the mouth. Should a child close its mouth obstinately, as sometimes happens, the nostrils should be compressed, and the mouth will be immediately opened. The child, as a rule, is so taken by surprise that there is no

difficulty. No gags, as are sometimes advocated, are necessary, the instrument itself acting as an efficient gag.

Adults frequently ask for time to breath or spit ; do not allow it, as the flow of blood obscures the second tonsil, and tends to render the patient alarmed and nervous. Adults frequently say that the assistant caused more pain by his pressure, than the operator, and that the operation is actually not so disagreeable as being painted with nitrate of silver or other caustics. The blade should not be pushed home till the tonsil well projects through the ring, and if any portion of the palato-glossus projects with the tonsil, it is better to remove the instrument and re-introduce it. Any wound of the soft palate produces great after pain, the resulting sore much retarding the healing of the part, and a wound of the muscles of the fauces in the case of a vocalist would be very likely to impair the voice, especially in the higher notes. Signor Garcia once honoured me by attending an operation on a favourite pupil, as I afterwards learnt from the patient, to see that I did not interfere with the pillars of the fauces, and he is undoubtedly right in his idea, that any wound of the muscles acting on the soft palate is likely to prove very injurious to the voice.

On every account it may be asserted that if both tonsils require operation, they should be operated on at the same sitting : by so doing, a second shock is avoided, and the difficulty of swallowing after operation on one tonsil is the same as after removal of both, while prolonging the affair is only cruel to the patient ; this is mentioned, since even medical attendants may be induced to compromise matters, by telling patients that only one side shall be cut at a time.

It is frequently urged by patients, and with some show of reason, that it cannot be right to remove the tonsils, as they of course are intended to perform some important function, and people often exclaim "what am I to do without my tonsil?" The tonsils themselves are not removed, but only the diseased and projecting portions which consist almost entirely of new growth, and that of a very low organization. The new tissue is furnished by successive deposits of fibrine, which are thrown out during the inflammatory periods and become gradually but imperfectly organised, as is proved by their slight sensibility and vascularity, and by the fact that the larger the tonsils, the less pain and bleeding occur during their removal. I have frequently removed immense growths, which actually met in the middle of the mouth, with the

loss of but a few drops of blood; the tonsils in these cases were pale and flabby, with large blue veins ramifying over them in the mucous membrane; such large growths might well inspire a Surgeon, unaccustomed to the operation, with a fear of serious hæmorrhage. The secreting portion of the gland after the operation, is left hidden between the pillars of the fauces, and continues its proper function of lubrication during deglutition. The tonsils in a perfectly healthy subject ought not to be seen projecting into the throat and in a few weeks after a neatly performed operation it becomes very difficult to determine that any excision has taken place.

With regard to hæmorrhage, though it is often abundant for the first minute, I have never known it to give any real trouble, by adopting the following treatment; immediately after the operation, let the patient *slowly swallow*, a saturated solution of tannin,* *freshly made*, and in a few minutes every trace of bleeding will have disappeared. Tannin may not be quite so powerful a styptic as perchloride of iron, but it is far more cleanly and agreeable, and does not conceal the bleeding spot with a black coagulated mass, as

*I have in another paper advocated the use of tannin in preference to iron in general, aural, and obstetric surgery.

does the iron; after the use of tannin, the tonsils are seen to be coated with a delicate pink film of coagulated fibrine.

Fatal and dangerous instances of hæmorrhage have I believe only happened in cases where the bistoury had been used, and where the parts surrounding the tonsil had been cut, which should never happen if the guillotine is employed. It may occur to the lot of anyone to meet with a case of the hæmorrhagic diathesis, such an one came under my notice lately. I had made a very small incision into a tonsillar abscess, without any important bleeding taking place, the man however returned next day, having as he said, lost a considerable quantity of blood. A large black distended swelling occupied the site of the tonsil, from which blood was oozing *external* to my small incision; I passed in a probe, but nothing but blood issued, and I discovered that it was the abscess cavity, distended with blood, which had filled and pointed in a new place, blood continued to discharge for five days, which was always kept in check by strong tannin solution, and ultimately the sac of the abscess discharged into his mouth, and the tonsil shrunk to a reasonable size. In this case I found that the man

had been admitted previously into the Royal Free Hospital owing to bleeding after a tooth extraction. It is, however, remarkable that the hæmorrhage is not more frequently dangerous if one considers that most of the more important branches of the carotid, anastomose in the tonsillar region, but I believe the explanation is, that only the remote and smaller branches actually enter the glands, and that if the glands alone be incised there is no reason to fear this danger.

The after treatment, when the bleeding is arrested by the tannin solution is simple, no solid or warm food should be taken for two days, and if possible the patient should remain at home, this is imperative if there is an east wind ; in fact the operation should not be undertaken if there is a suspicion of an east or north-east wind, and this is the only danger to be guarded against with which I am acquainted.

The sensations of patients vary much after the operation, some complain of considerable pain, and can swallow nothing but liquids for two days or even more ; others say that the throat is only a little sore, and that they can eat anything.

TONSILLITIS, CYNANCHE TONSILLARIS, or QUINSY is worthy of careful consideration as it frequently

causes great suffering and prostration, is very apt to recur, and may be attended even with fatal results.

The general symptoms are fever, pain, and more or less swelling of the tonsils and palate ; the disease begins by chilliness and malaise ; and there is invariably constipation and a very foul tongue ; the occurrence of rigors indicates supuration. The voice is very characteristic, the patient speaking as though his mouth were filled with hot food.

On examination, a varying amount of redness and swelling of the tonsils and fauces will be apparent ; these parts being at first shining and then covered with mucus or cheesy secretion, and the mouth filled with viscid saliva. There is great pain and difficulty in swallowing, though the patient is constantly impelled to make an effort to swallow the troublesome saliva ; liquids frequently return through the nostrils, and there is often great pain in the Eustachian tubes and ears.

Commonly nothing can be swallowed for several days but a few spoonfuls of liquid food. The nights are sleepless, and the patient fears to sleep from a dread of impending suffocation, though actual dyspnœa is rarely present. Both glands may be affected, though this is comparatively rare,

except in the follicular form. Tonsillitis is generally not considered to be contagious, but I am inclined to think that the follicular form may be epidemic and occasionally contagious. Dr. Farquharson, at the Medical Society in 1873, gave the history of a serious epidemic of contagious follicular tonsillitis at Rugby, which was only arrested by carefully isolating the cases as soon as they occurred amongst the boys.

Though arbitrary divisions in disease are to be deprecated, still I think that in tonsillitis, the inflammation occurs in three distinct situations which affect the progress of the disease and its after effects. If the inflammation occur in the cellular tissue, forming the bed of the tonsil, matter is almost certain to form; there is very great swelling, the œdema extending frequently into the soft palate and uvula, with much difficulty in swallowing, the jaws are fixed, and the tip of the finger can be hardly introduced between the teeth; the tonsil does not project into the mouth and any attempt at its removal would be futile. In this form, the neighbouring lymphatics frequently become affected and there is danger of œdema of the glottis: the cellular planes in the neck may even become involved, and I once saw a case which from pressure on the wind pipe from such a condition

appeared to demand tracheotomy; this operation has actually been performed for tonsillitis.

The pus usually points in the soft palate, in the pharynx or in the pillars.

When the inflammatory process occurs in the parenchyma of the gland, there is also much difficulty and pain in deglutition, but there is not so much obstruction, as the surrounding parts are not so much affected, and the mouth can frequently be opened wide enough to allow of the introduction of the guillotine; the tonsil projects from between the pillars, and there is a distinct tendency to the formation of pus in the *substance* of the tonsil; nevertheless, resolution not infrequently takes place.

In the third situation the inflammation is chiefly confined to the mucous membrane lining the crypts and secreting portion of the gland, and from my observation there is rarely, in these cases, a tendency to the formation of pus, but the tonsil is covered with numerous yellow spots, which consist of a cheesy, offensive secretion exuding from the orifices of the follicles; there is also great difficulty in swallowing, but the mouth can be opened fairly well. This form of the disease is not uncommonly mistaken for Diphtheria.

Quinsy in young children is not common, but is much more dangerous than in more advanced life, as œdema of the larynx occurs much more frequently, and the internal carotid artery is so close to the tonsil that it is surprising that more fatal cases from hæmorrhage due to ulceration of the carotid walls have not been reported.

The treatment of tonsillitis is by no means in a satisfactory state, as the most varying modes of practice are in vogue, some of which are positively harmful, while others leave the patient in needless suffering. Blistering, whether by mustard, ammonia, or cantharides adds to the patient's suffering, increases the swelling about the neck, and is useless in cutting short the disease; gargles are perfectly useless and distressing. If the case be seen in the early stages, a brisk cathartic should be administered as the bowels are always constipated, and drop doses of tincture of aconite should be administered every hour. This treatment often cuts short the inflammation. Great relief is afforded by sedative inhalations of chloroform and tincture of benzoin every three or four hours, the patient sucking ice in the intervals; linseed poultices containing extract of belladonna may be applied at night. Considerable difference in practice exists with regard to the time for making an

incision in the swollen tissues. I consider that incisions in follicular tonsillitis are useless, but that in the other forms, when there is obvious swelling either in the tonsil or palate, whether fluctuation is present or not, a very fine tenotomy knife passed straight through the affected part affords frequently immediate relief, both by the bleeding and by the removal of tension. After the incision, the patient at once expresses relief, and can frequently open the mouth an additional half inch or so. If pus follow the knife, the incision should be enlarged inwards ; but even though no pus follow the incision it will, if already formed, almost invariably burst through the incision in the course of a few hours, with immediate relief to the patient. If several attacks of quinsy have previously occurred, and the mouth can be opened widely enough, the best practise is to remove the projecting portion with the guillotine, by which measure the abscess is opened and the chronically diseased tissue removed by *one* operation.

I find that many practitioners who have seen this done, express surprise at the operation being undertaken during the acute stage ; but as a fact, the resulting bleeding is beneficial, the relief to the patient is great, and future operations are avoided.

The exciting causes of quinsy are primarily cold, and tonsils which are permanently enlarged are peculiarly liable to attacks of inflammation on slight provocation, but there are people with a peculiar constitutional tendency to tonsillitis, and in adult life it will generally be found that this is an indication of a gouty or rheumatic diathesis,* especially in constantly recurring cases of follicular tonsillitis. When the diseased tonsil has been removed in one of these constitutional cases, it will be found that slight abortive attacks of inflammation may periodically recur in the stump, but without suppuration, and with absence of all the severe symptoms which previously happened.

Much success will be met with in preventing this recurrence by carefully attending to the constitutional treatment, and by the use of Turkish baths, which latter, are of much more value in the treatment of diseases of the air passages than is generally recognised.

* My Colleague, Mr. Lennox Browne, lays great stress on this gouty tendency, and I believe he first directed my attention to it.

DISEASES OF THE UVULA.

When considering the affections of the uvula, which have so frequently such a baneful effect on the brilliancy of the singing voice, it must be a source of regret that no thorough explanation of its functions has been discovered, as it is difficult to imagine that an organ so definite and regular in its appearances in man should exist without a purpose. Nevertheless, though the uvula appears to act at least as an adjuvant to the performance of several functions, its physiological study is much obscured by the fact that its *complete* removal—as I have several times witnessed—appears in most cases to be attended with merely negative results. The study of its development in foetal life and amongst the lower mammalia also throws no light upon its probable uses. I have communicated with several eminent English comparative anatomists on the subject, and have been able to glean no information.

Professor Huxley writes me “I have made no special study of the uvula and can give no

H.

information respecting it, beyond such as will be found in the ordinary text books of comparative anatomy."

Professor Allman writes "the uvula must be classed among organs whose uses have never yet been satisfactorily determined; it is more or less developed in the other mammalia, but I know of no observation which throws much light on the purpose it is intended to serve in the animal economy."

The late Sir Duncan Gibb, in an interesting article communicated in the *Lancet* in 1872, endeavoured to prove that the uvula played an important part in deglutition and vocalisation, and I entirely agree with the facts which he adduces, but they appear to me to exclusively apply to the functions of the azygos uvulæ, and a small portion only of this undoubtedly powerful muscle appears in the uvula. The definite and remarkable shape of the uvula is still unaccounted for. It has been suggested that the uvula acts as a shoot or conduit for the mucous and salivary secretions, lubricating the orifices of the windpipe and gullet; this explanation may also not be unworthy of consideration.

It may be remarked here, that in some cases of destruction of the uvula by disease, there is a tendency for liquids to pass into the

nostrils, but in such instances there is nearly always an encroachment on the remaining structures of the soft palate. I have also observed that in the production of the higher notes and the falsetto voice, the uvula is powerfully retracted by its muscles *into* the soft palate. With regard to the production of the falsetto, concerning which so much difference of opinion exists amongst both musicians and physiologists, I may state that I have recently had three professional singers under notice who can all produce falsetto notes with ease whilst the laryngoscopic mirror is in their mouths, which is somewhat rare, and I can assert that I have been unable to detect any appreciable difference in the appearance of the vocal cords in passing from the natural to the falsetto voice. One gentleman, an American baritone, who has rendered me great assistance in my observations both by the intelligent interest he manifests as a musician and by the great toleration he evinces under laryngoscopic examination, is so thoroughly convinced that the falsetto is produced by the soft palate, that I will quote his own words. "No matter however hoarse I may be, from congestion of the vocal cords, to which I am subject, provided the soft palate or tonsils are not swollen, I can execute the falsetto with as much ease as if I were in a perfect

state of health, and am able to make chromatic runs and trills with entire ease, though totally unable to make a perfect tone in the natural voice."

Sir Duncan Gibb remarked that in females who possess the highest singing compass, the uvula and soft palate are relatively small, but that their muscles are capable of the most delicate and prolonged actions.

A condition of relaxation of the mucous membrane, either with or without hypertrophy of the muscular and cellular tissues, is the most common form of disease in the uvula, and this relaxation may be chronic or only occasional, depending on catarrh or on a debilitated state of health.

Its appearances vary considerably; if there is much hypertrophy of the substance of the organ, the uvula appears clubbed and thickened and is often incapable of being retracted into the soft palate: if the mucous membrane only is affected, the uvula may taper down to a fine point and look quite transparent in its lower third. In colour, the uvula may appear pale and anæmic, or on the other hand so congested as to be almost purple, with large varicose veins running over its surface.

A relaxed uvula is frequently overlooked, because at the moment of opening the mouth the patient at the same time takes an inspiration by which the soft palate is drawn upwards, causing the uvula to be retracted almost out of sight. If the patient be directed to repeatedly open and close the mouth the muscles become exhausted, and the temporary nervousness is overcome, and if the uvula is really at fault it will be seen lying on the root of the tongue, though possibly at the first glance into the mouth it was high up in the arch of the soft palate. The same effect may be produced by directing the patient not to breathe in, as he opens his mouth.

Cases are on record where the uvula has been so elongated that it could be drawn out between the incisor teeth: in such instances the mucous membrane is almost entirely in fault. It is, in my opinion, unquestionable that in some cases the uvula falls into the larynx, and this occurs most frequently at night, especially if the patient lies on the back, the result is a violent paroxysm of coughing, and considerable difficulty in obtaining sleep, and the attack is generally considered to be asthmatic in character. Some patients have the consciousness that they have as they describe it "swallowed something,"

i.e., the uvula, or they recognise that the attack is always brought on by assuming certain positions. In these cases there exists, as a rule, a generally relaxed and congested condition of the mucous lining of the pharynx, larynx and bronchi.

The cough produced by a uvula which constantly rests on the base of the tongue* or which occasionally touches the lip of the epiglottis is frequently of a most harassing, and to bystanders, most irritating character, and it is not at all infrequent to find that the impression exists amongst the patients friends that consumption is clearly indicated. It will be frequently noticed that persons who habitually indulge in stimulants, especially spirits, suffer with a congested pharynx and an enormously hypertrophied uvula, producing most distressing cough, which even under such disadvantageous circumstances, is often much relieved by an operation on the offending uvula. The voice is also in a case of long standing, hoarse, as there exists a chronic congestion of the whole of the interior of the larynx, which in an

*"The sensation that "something wants removing" is very general; and a gentleman now living near Hastings, actually in a fit of desperation, as his then medical attendant would pay no attention to the uvula, cut it off with his own hands, and was rewarded by the immediate cessation of his cough and concurrent symptoms."

The uses of the Uvula, by C. B. Garrett, M.D. *Lancet*, p. 462. 1874.

uncomplicated case frequently disappears in a manner most gratifying to the patient after the removal of the offending portion of the uvula. One must not, however, too hurriedly jump to the conclusion in a case of hoarseness, with obviously relaxed uvula, that it is the uvula which is alone in fault, as on two occasions lately, at the first glance into the mouth, I concluded that the laryngeal irritation was produced by the elongated uvula, yet the subsequent use of the laryngoscope demonstrated the existence in the one case of two and in the other of one polypus on the vocal cords. I would therefore always urge the use of the laryngoscope before assuring the patient that his troubles will be ended by an operation on the uvula. A diseased uvula is also frequently a focus* for the spread of mischief along the eustachian tubes into the tympana, both by continuity and sympathetic irritation; that this is quite possible may be proved by the fact that great pain is often felt in the ears after an operation on the uvula.

*“ Irritation often spreads from the uvula to the ear, through the eustachian tubes by continuity of surface; and I am also persuaded by extensive observation, that an irritable uvula frequently deranges the organ of hearing by purely sympathetic irritation of the ear. I have seen many cases in which tinnitus was manifestly excited in this manner.”

On Throat Deafness. James Yearsley, p. 14.

The sense of smell is also sometimes impaired by the irritation produced by a diseased uvula, and obstinate morning sickness may be occasionally traced to the same cause. Professional singers who are constantly using their voices, even when the victims of catarrh, are frequently subject to a chronic relaxation of the uvula and pharynx, which ultimately has a very unpleasant effect on the quality of the voice, though they generally learn some trick of forcing their voices, which for a time relieves them of their troubles.

The instruments I find most convenient for the removal of the offending portion of the uvula are a *straight* finely toothed forceps, $7\frac{1}{2}$ inches long, and a pair of curved blunt pointed scissors, longer in the handles and with a greater curve than those generally sold by instrument makers; the hand is thus entirely prevented from obstructing the view, as is apt to occur with shorter instruments. Scissors are also made with a rectangular beak, which is passed behind the uvula and which is supposed to prevent any wound of the pharynx; I have frequently operated with this instrument but fail to see the utility of the beak and in fact consider it an encumbrance. A uvulatome is also sold extensively, for which an advantage is claimed that it enables one to dispense with the use of

two separate instruments, but as the uvulatome seizes the uvula and also cuts it off by the same motion, I consider that too much is left to the instrument to perform automatically, the same objection which I have to the various complicated tonsil guillotines. Not unfrequently the uvula retracts by involuntary spasm, and thus a very inadequate amount, or, in other cases, an excessive quantity will be removed by such an instrument. The most important part of the operation is the determination of the *amount* of the uvula which ought to be removed, and this is best ascertained by gently drawing the uvula *forward* and mentally measuring the length of the organ carefully, before making the cut. The cut should be directed slightly upwards and backwards as the raw surface then points towards the nasal portion of the pharynx, and is not irritated by the passage of food. The same after treatment should be pursued as in the operation on the tonsils. The pain complained of varies much, some patients hardly feeling any at all; occasionally, considerable pain is felt in the ears for a few hours; sometimes there is an uncomfortable sensation as though there were a substance in the throat which ought to be swallowed, this may be relieved by sucking ice

and marsh mallow lozenges. In many cases the operation of cutting the uvula is much more difficult to carry out than an operation on the tonsils, owing to the sensitiveness of the throat, the tendency to vomit and the spasmodic action of the muscles of the soft palate. Dr. Yearsley says, "simple as the operation appears it is sometimes attended with considerable difficulty; and owing to the irritability of the throat, I have met with cases in which it could not be performed. In others, the slightest touch of an instrument, or even the finger upon the tongue, was sufficient to produce vomiting. In such cases it is necessary to accustom the throat to the contact of instruments for some days before the operation is attempted."

This operation in an appropriate case, whether undertaken for the relief of some distressing symptom or for the removal of some obstruction to the singing voice is often most remarkable and beneficial in its results. It is certainly most important for a singer to know that if the uvula become permanently relaxed the voice will suffer in tone and quality, and a sensation will be produced as though the higher notes were muffled, veiled, or even extinguished. Dr. Yearsley says "I have often known the injury to the voice and the respiration, the harassing cough of years, removed

in a moment by the loss of the uvula. The operation, moreover, renders the voice clearer than before, and increases its compass. In some professional singers I have proved that the excision of the uvula has gained for the patient one, two or even three notes in the voice, and this not in the falsetto, but in the natural register." Of the truth of this latter proposition I am thoroughly convinced and I possess the proof in the written statements of several singers on whom I have operated, and I alluded to this fact during a discussion on the subject at the Medical Society last session. In simple elongation of the uvula, dependent on obviously temporary relaxation of the part, whether resulting from a deteriorated state of health or catarrh, astringent gargles or painting with strong solutions of sulphate of copper or chloride of zinc will frequently persuade the uvula to return to its normal dimensions, though there is a great tendency to recurrence with the slightest exciting cause; many patients saying that "their throat always troubles them if they get out of sorts." But where hypertrophy actually exists, the uvula being both thickened and elongated, then removal of the abnormal length is the only remedy. Removal by caustics is very painful, tedious, and unsatisfactory in its results.

It is not at all uncommon to find the uvula bifid at its extremity, or the cleft may extend as far as its base; this condition constitutes the slightest form of cleft palate, and as I am not aware that it ever produces any inconvenience or alteration in the voice, no operation is required. In certain rare cases, no evidence of the rudimentary existence even, of a uvula could be discovered.*

Œdema of the uvula occasionally comes on quite suddenly from cold, without any symptoms in the tonsils or larynx, and the swollen organ may produce considerable distress; scarification gives great relief, or a portion of the uvula may be removed, care being taken to allow for shrinking, and therefore not to remove too much. Œdema of the uvula in the course of diphtheria may be a source of considerable danger to the respiration,

* "Whatever the extent of fissure there is generally more or less of the hard and soft palate observable on each side, yet there are even exceptions to this rule; thus, I find reported 'two cases of *total absence* of the uvula, one in a Hindoo girl, and another in the practice of Mr. Wallace, at Bow,' and M. Ancelet refers to an example in which there was a total absence of the soft palate in a child. A patient was under my care in the hospital, aged 6, who had a congenital fissure extending through the soft palate, and involving the hard to a very slight degree, but there was *not a vestige of uvula on either side*, the soft palate being continuous on either side with the pharynx. It is further of interest to note in connection with the case, that the *child's voice was not very much impaired*."

but here removal would not be permissible, since the wound would be almost certain to form a fresh focus for diphtheritic deposit and ulceration. Warty and vascular growths occur on the uvula, and sometimes occasion distressing cough; they may be easily removed with the curved scissors.



PLATE I.



Fig. 1.



Fig. 2.

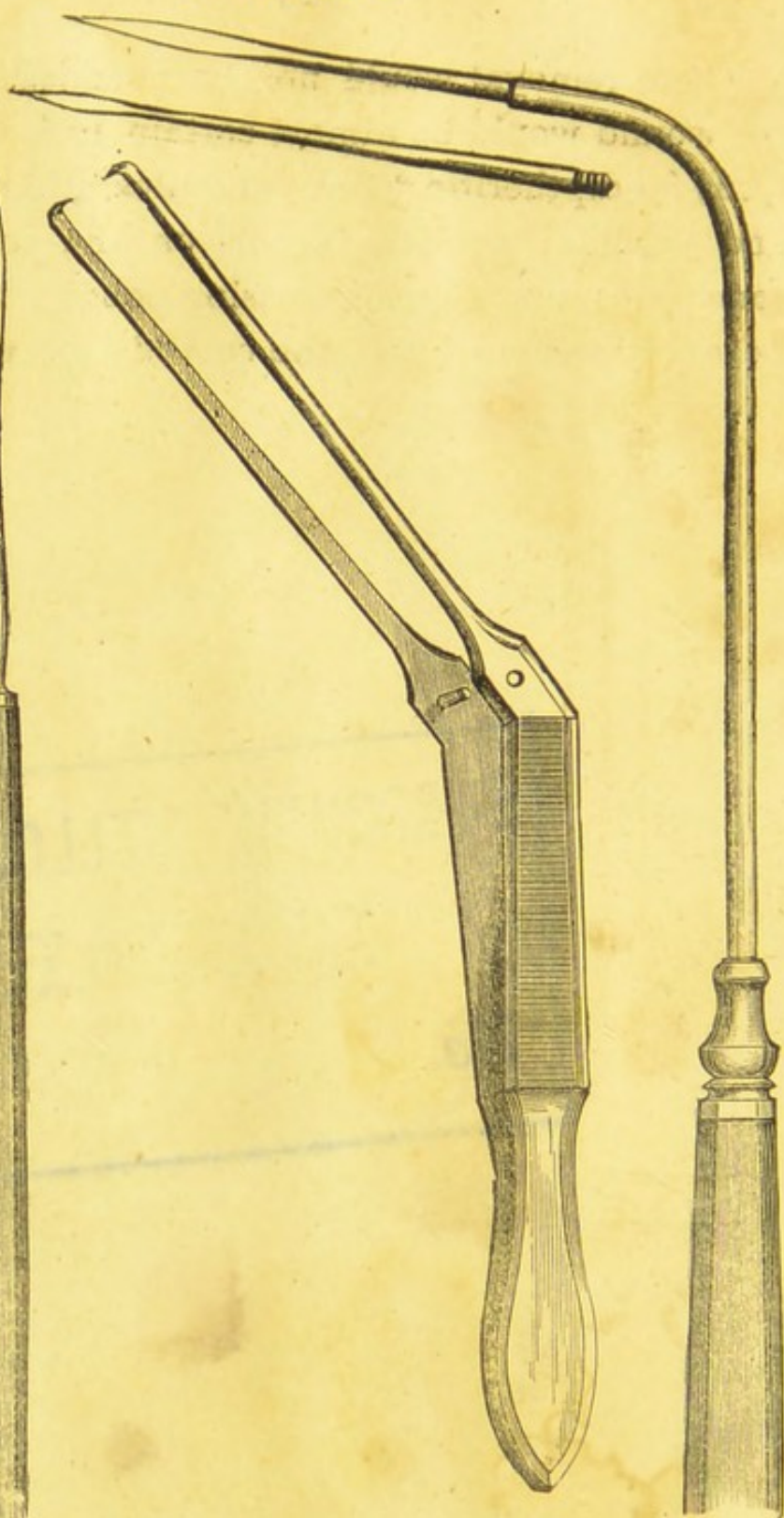


Fig. 3.

Fig. 4.

PLATE II.

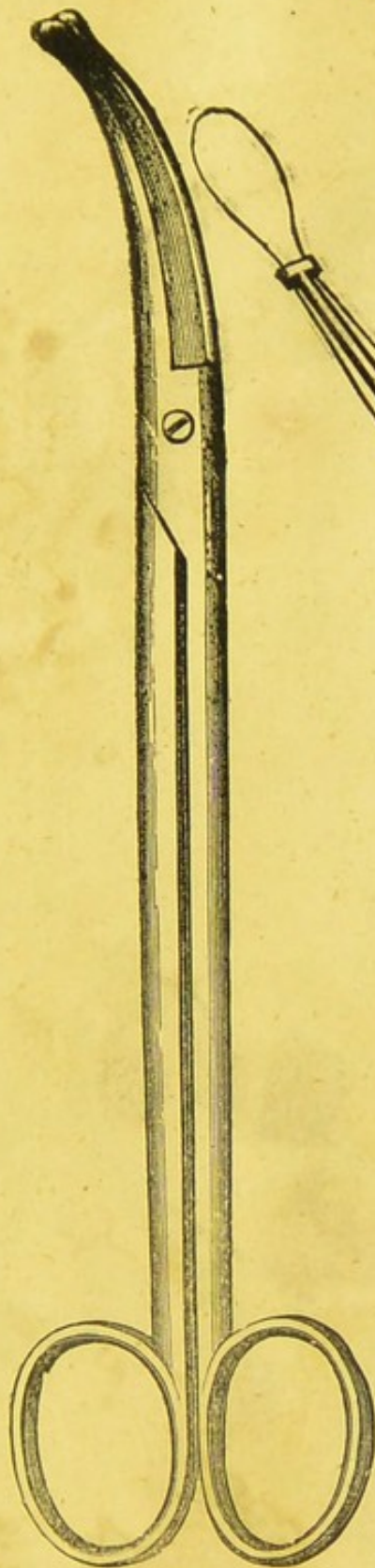


Fig. 1.

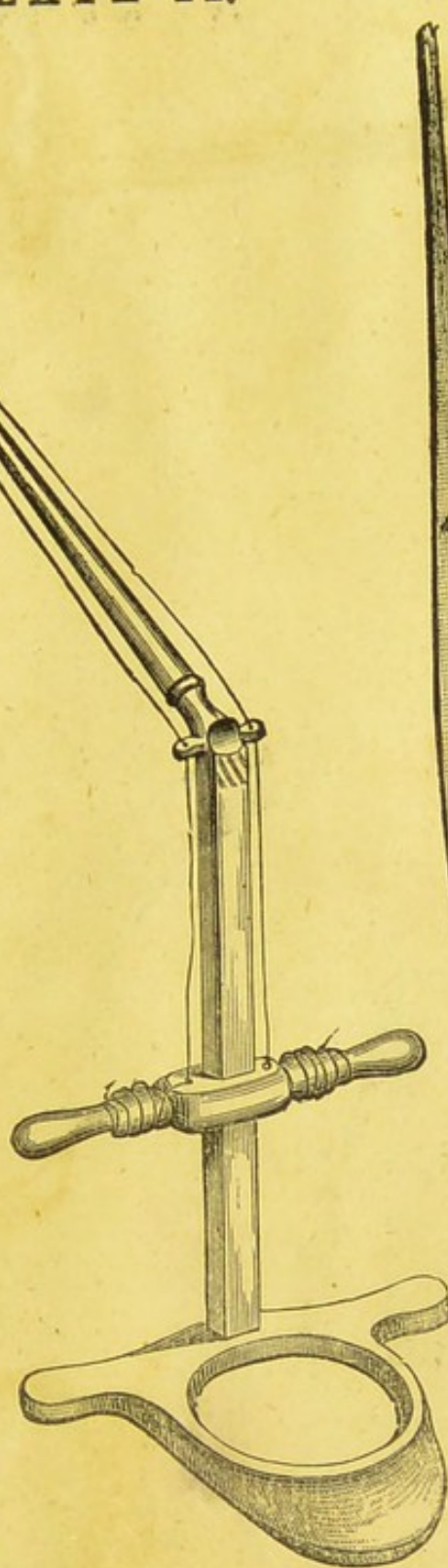


Fig. 2.



Fig. 3.

PLATE III.

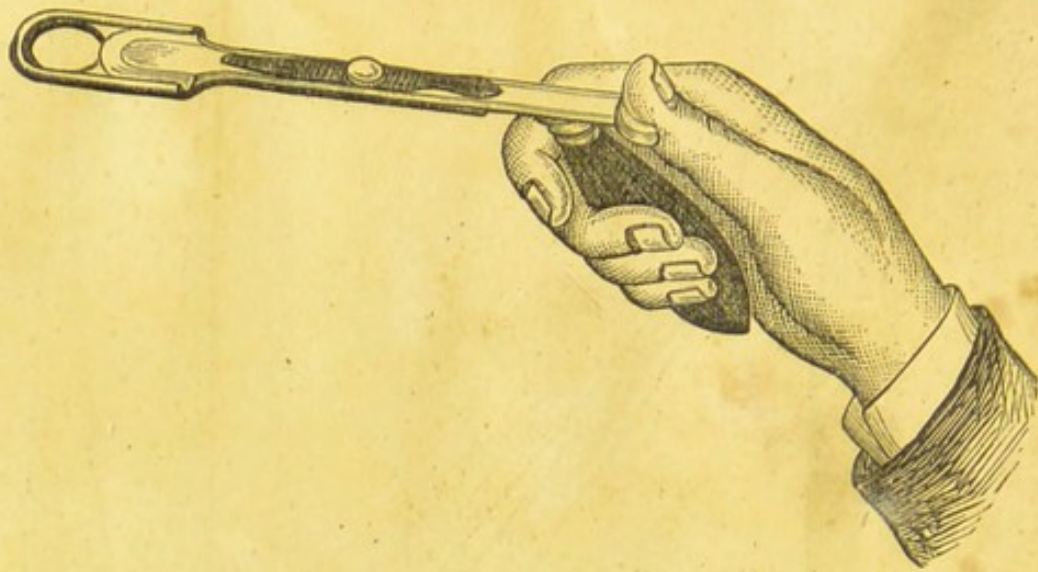


Fig. 1



Fig. 2

PLATE I.—(*Actual size.*)

- FIG. 1.—Polypus Hook (Purves), with cutting edge, for removing Aural Polypi, and Granulations.
- FIG. 2.—Knife for incising Tonsils, or the Periosteum over the Mastoid.
- FIG. 3.—Aural Forceps, toothed, for removing soft foreign bodies from the Ear.
- FIG. 4.—Lances for perforating Membrana Tympani, and scarifying the Larynx; one handle.

PLATE II.

(*Two-thirds the actual size.*)

- FIG. 1.—Uvula Scissors. (The curve and length are important).
- FIG. 2.—Polypus Suare (Wilde). Very useful for both aural and nasal Polypi. This Suare may be modified to hold a Paracentesis Lance, or the wire may be made to run through a Canula.
- FIG. 3.—Uvula Forceps, toothed.

PLATE III.

- FIG. 1.—Simple Tonsil Guillotine, the thumb in position for operating.
- FIG. 2.—Inhaler (Robson). This inhaler combines cheapness and durability with efficiency; air passes up freely through the whole body of fluid, and as the action is almost completely automatic the inhaler is well adapted for the use of children.

These instruments are made for the Author, and supplied by Messrs. MAW, SON & THOMPSON, 11, Aldersgate St. London.









