

TURNBULL (C.S.)

COMPLIMENTS OF AUTHOR.

ADDRESS IN OTOLOGY.

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REPRINTED FROM TRANSACTIONS OF PENNSYLVANIA STATE MEDICAL SOCIETY,
THIRTY-SIXTH ANNUAL SESSION, SCRANTON, PA., 1885.



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MR. PRESIDENT AND GENTLEMEN :

Under the head of Otology, I have decided to consider this special branch of surgery, with particular reference to diseases of the ear in children, and confine myself to the study of the hygiene and practical treatment of the ear, making such suggestions as my experience leads me to commend. By the advice of my respected friend and our worthy ex-President, Dr. Henry H. Smith, I have made my paper brief, and given the results of what I claim as common-sense treatment, or a new departure in aural therapeutics.

In the management of ears in general, whatever mistakes are made I prefer to consider due rather to sins of commission than to those of omission.

In prescribing for the ear, entirely too much guesswork is indulged in, and too much precious time is lost before characteristic symptoms are recognized. Ophthalmology is now, I am proud to say, a recognized branch of surgery, and most of our graduates enter the profession with some knowledge of the eye and its diseases; while otology, with a few exceptions, is neglected, not because it is difficult, but because men recognized as teachers scarcely deem it worth more than passing mention. Recent graduates look upon it as a subtle branch of surgery, and, at the commencement of their careers are willing to acknowledge their ignorance, but as they grow older, become bold enough to recommend stereotyped methods of treatment which, in nine cases out of ten, result in much more harm than good. I consider it recklessness, and this is putting it very mildly, to prescribe for an ear without first having made a careful examination of it.



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As soon as a discharge from the ear makes its appearance, something is invariably dropped into it, or, in conformity with custom, it must be "syringed out." Nothing is more damaging to the successful termination of such cases. I would not complain if pure, warm water were used to syringe the ear, or still better, if a salty or an alkaline solution were used, but the "Castile soap" is invariably added. Perhaps warm milk may be used. The soapsuds make an irritating solution, the milk, one that rapidly ferments and becomes acid, so that the auditory canal, it may be a warm cavity filled with simple mucus or perhaps serum, is converted into one that is inflamed and filled with fermenting fluid, which fertilizes the soil and furnishes a home for fungi and bacteria. What next is done? A fluffy piece of cotton is rolled into a dense mass and stuffed into the meatus. The sour, fermenting, perhaps fetid, mass, now corked up, fairly boils, and where a benign inflammation was in existence, an active and a dangerous one has certainly been started.

The majority of cases of otorrhœa in children under two years of age would recover, and the hearing would not be damaged, if they were simply let alone.

Now, this statement may seem startling, but it is nevertheless true. Ordinary cleanliness is all that is necessary for the proper management of such cases. In the use of medicated solutions to be dropped into the ears of children, the anatomical topography of the parts must be borne in mind. The auditory canal is short, and the Eustachian tubes are patulous, and the solutions syringed into the ears of children run directly into the throat. For this reason, if for no other, the syringe should not be used.

Admitted that nothing but pure water has been used, even this is too irritating for the mucous membrane of the middle ear, the Eustachian tubes and fauces (it must not be forgotten that the mucous membrane of the middle ear serves the purpose of periosteum). Those who have accidentally gotten water into the post-nasal space, will recall its unpleasant, irritating effect.

After the exanthemata, dentition is the most fruitful source of otorrhœas, and the tendency of all such cases is to recover, without damage to hearing, providing they be kept clean and Nature be given a chance.

I want to impress upon parents, and those who are to advise them, the necessity of using the utmost care in the art of cleansing

the ears of children. Wax (cerumen) with which Nature has furnished the auditory meatus, is usually swabbed out weekly, if not oftener, with a twisted-up corner of a towel, handkerchief or wash-rag soaked with water or soapsuds, and more frequently than is supposed, the hair-pin is called into requisition. By these means the wax is pushed in and well rammed down, layer after layer, and at each washing a layer of desquamating epidermis is added (as is the cow's hair to the mortar), and this serves to bind the mass together and make its removal more difficult.

In this connection, I want to call especial attention to a toilet article now generally sold by the druggists, called the "Aurilave." It is supposed to be a swab for cleansing the ears, and consists of a small piece of sponge on an ivory handle. The purchaser is directed to wet the sponge and with it cleanse the ears.

This dangerous implement, for those who are so unwise as to use it, and who expect wax and water to mix, is a delusion, but an excellent thing, *pecuniarily*, for the aurists. Children naturally rebel, and interference with their ears is generally a cause for war in the nursery; and it is just here that I wish to put in a plea for the juveniles, and condemn the usual practices of the best intentioned of nurses and mothers.

With but a few exceptions impacted cerumen in adults is found only in the ears of those who vigorously use water, soap and water or wet cloths to cleanse their ears from what they call dirt, and what I must recognize as absolutely essential to perfect hearing and a healthy condition of the ears.

Impacted cerumen must be first soaked by the instillation of a warm alkaline solution, and then, as in the case of inspissated cerumen, can always be safely removed by syringing with warm water, which procedure is the only one in which I consider the use of water permissible; even here, however, had water not been injudiciously used in the first place, the wax would never have become packed.

In case it becomes necessary—for superfluous cerumen or the lodgment of dust—to wipe out the meatus, it should be done with a dry, soft cloth, or a damp towel.

Discharges from the ear, in my opinion, unless they are sour or fetid, may be regarded as harmless in so far as the hearing is concerned. Serum, mucus or muco-pus I simply wipe out with absorbent cotton, using only a pledget large enough to fill the

entrance to the ear. I never allow patients to wipe out their own ears, except in the manner indicated. Each soiled pledget of cotton is thrown away, so that the patient may, when about his work, and with his vest pocket full of absorbent cotton, be enabled to keep his ear thoroughly cleansed during the day. If the discharge has become fetid, boracic acid in solution, suspension, or as an insufflated powder, must be used. The most essential point in the cleansing of discharging ears is the thorough freeing of the middle ear from secretion.

This must be done by teaching adults Valsalva's experiment, (making forcible expirations while holding the nose and keeping the mouth shut).

Now how can this all important process be accomplished in the case of children? In only one way.

By forcible inflation, or by having them blow their noses. *Every child should be taught, if possible, to blow its nose.* If it has not been, or cannot be taught to free the nostrils of mucus, its chances of retaining hearing power, in case of acute or subacute disease of the middle ear, are much poorer than in the case of one who has learned to blow its nose. Handicapped by being unable thus to free its nostrils, a child cannot possibly inflate the middle ear (tympanum) and clear the Eustachian tubes, so that, to such, the dread exanthemata must, as a rule, mean deafness. Forcible dilation by Politzer's method, is generally sufficient in the case of adults, but will not answer for children, who only become demoralized, and are terrified by the presence of any one who has been so injudicious as to attempt its use.

For children I would recommend my own method, which is as follows: One nozzle of an ordinary auscultation tube is protected by a perforated "lead-pencil rubber-cap" slipped upside down over it, or a piece of gum tubing is sufficient, to cover the nozzle.

This is called the nose-piece, and can be held firmly, as it plugs one nostril, and acts as a point of support upon which to close the other. As the child cries lustily or else blows out (as if to blow out a light), the surgeon, having the nozzle at the other end of the tube in his mouth, blows a quick, short, blast, which invariably inflates both ears. Once assured that the procedure does not cause them pain, children enter into the spirit of it, and blow with a will. The great secret in the successful treatment of all discharges from the ears is dependent upon the recognition of the fact that

fermentation and putrefaction soon occur in the moist auditory canal.

So long as a discharge is not allowed to ferment, it will not become fetid, seldom even purulent.

Eczema of the auricle and external auditory meatus, whether in a child or in an adult, is generally a disease caused by neglect or injudicious interference. In children it is usually induced by neglect; in adults it is generally caused by meddling attempts at ablution.

In children, eczema readily yields to treatment, providing soap, especially Castile, be left out of the question; while in adults, it is more persistent and stubbornly recurs, monthly, perhaps, for several years. Mild cases yield to the constant contact of a weak mercurial ointment, while chronic cases require also repeated applications of a saturated solution of nitrate of silver.

Next to chronic otorrhœa, eczema does more to impair the functions of the ceruminous glands than anything else. Eczema, too, is the principal cause of the formation of furuncles and abscesses in the auditory canal, because desquamation causes itching, and scratching, in turn, will surely cause boils. Long after an eczema has been apparently cured, the canal must be kept greased, so also, after accumulations of wax have been removed.

In speaking of irritation of the auditory canal, I want to mention a peculiar form of *deafness*, accompanied by a peculiar condition of the ears, that I have often noticed in *old persons*. Atrophy of the ceruminous glands causes *itching*, and this is accompanied by *a sense of fullness*, caused by faucial relaxation, which induces *old folks* to *pick their ears*, using hair pins, spectacle-arms, etc., until even the *membrana-tympani* becomes so *relaxed* that it requires constant titillation to increase the hearing power. This condition can be greatly relieved by "snaring up" the *membrana-tympani* by frequent applications of a slightly stimulating and anodyne ointment, composed of morphia, yellow oxide of mercury and cosmoline, for the meatus, and a strong alkaline gargle for the fauces, and perhaps the introduction of artificial teeth.

For the army of those unfortunate beings suffering from deafness of long standing, and roaring in the ears (*tinnitus aurium*), which I prefer to classify under the head of "plastic (cicatricial) inflammations of the middle ear," I regret to say, all treatment remains unsatisfactorily experimental.

Instrumental interference, such as the use of Politzer's apparatus (for forcible inflation of the middle ear), the Eustachian catheter, the forcible introduction of vapors, etc., I consider risky and decidedly meddlesome, unless in the hands of an expert. All attempts to bougie the Eustachian tube I would ridicule, on anatomical grounds.

Where Valsalva's or Politzer's method cannot be made available, further interference is apt to do harm.

In the treatment of tinnitus aurium, the different preparations of the erythroxyton coca (particularly a good wine) are to be especially recommended, not only because of their direct local effect on the throat and fauces, but also for their general anæsthetic effect on the entire mucous tract. In this connection, Squibb's hydrobromic acid, in conjunction with bromide of sodium, is not to be forgotten, especially in cases of tinnitus due to disorders of cerebral circulation, dependent upon central nervous irritation.

Diseases of the internal ear characterized by profound deafness and a peculiar form of tinnitus (sharp, shrill, ringing sounds), are usually caused by specific disease or traumatism, and seldom yield to treatment.

Those of syphilitic origin, which might have yielded to a full specific cause, are generally of such long standing that little else is left to be done—other than to make a diagnosis.

Under the head of diseases of the internal ear, I want to describe one not unlike "boiler makers' deafness," which I call "*mill operatives' deafness*." This peculiar disease occurs oftenest in those who work in a mill where weavers are at work and looms are running.

This is a disease of the auditory nerve, caused by prolonged irritation or concussion (*erschütterung*) of the nerve, caused by the rattle and clatter of machinery. The first grave and characteristic symptom of which is that known as "*paracousis Wilisii*," or the power of being able to hear distinctly only when in a noise.

Treatment for this disease is without avail. Nothing remains to be done except to leave the noise and seek another (out of doors is the best) form of employment, in order to save what hearing power may be left. Tinnitus caused by this disease is incurable.

In conclusion, allow me to say: For *collections of wax* in the ears, soak and syringe.

For *pain* in the ears, use dry heat and anodynes in full doses.

For *children's earaches*, never forget the hot foot bath and aconite. Tincture of iodine behind the ears is less annoying and does just as well as a blister for *counter-irritation*.

Wipe out *running ears* with absorbent cotton, and do not meddle too much with acute cases.

Sub-maxillary tickling on either side, with sudden impairment of hearing, means reflex tubal irritation, and calls for faucial treatment.

Chronic cases of *otorrhœa* call for powdered boracic acid, and get well. *Never plug* discharging ears with cotton. *Never pick* the ears with anything smaller than the finger.

Given a case of deafness in an adult, insist on Valsalva's experiment. Given a case of deafness in a child, insist upon its frequently blowing its nose or else forcibly inflate, for it, the middle ears.

Always be persuaded, for your own and your patient's sake, to look before you leap, and *never prescribe for an ear until you have carefully examined it and looked into the meatus*.

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