Treatment of Chronic Suppurative Otitis Media.

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TREATMENT OF CHRONIC SUPPURATIVE OTITIS MEDIA.

The object of this paper is two-fold: *First*, to elicit a discussion of the subject which shall set forth the latest and best methods of treatment; *Second*, to protest against a mode of treatment that has been highly lauded of late. I refer to what is called the dry treatment, in which the external meatus is filled and even packed, with a powder that is to remain from one visit to another. Although the principle involved did not recommend the practice as being in accord with good surgical doctrine, the favorable results reported induced me to try it, as I have a habit of trying all new methods which promise any improvement on the old.

The plan proposed was to remove all the pus from the drum-head and meatus with dry absorbent cotton, inflate the middle ear, again remove what discharge was forced through the perforation of the membrana tympani by the inflation, and then blow powder into the middle ear, and fill the external meatus with the same. It was even urged that the powder should be put in, a little at a time, and each layer packed, one upon the other, until the meatus was full. It was claimed that in this way the discharge was speedily stopped; and it was—that is, the exit was stopped as is a bottle with a stopper, so that the contents could not escape. But suppose you want the contents of the bottle to escape, as you probably do, how is this to happen unless you tap it at the bottom, as one does in the nasal douche? This is just the condition presented by an ear tamponed in this so-called dry method. The discharge can hardly escape through the solid packing of powder which the absorption of

moisture converts into a dense plug. The purulent discharge does not dissolve it even if a soluble powder is employed, and when iodoform or bismuth is used solution is clearly out of the question. What results? The formation of pus does not often cease at once. It fills the middle ear nd finds exit through the Eustachian tube, if the tumefaction is not too great. When the tube is not patulous the damming up of the sewerage of the tympanum will naturally force the pus through the mastoid antrum into the cells, after the middle ear has filled. A very serious aggravation of all the symptoms is likely to follow.

That this method is contrary to a very important principle of surgery must be patent to all. An abscess should not only be opened, but should be kept open until the pyogenic process ceases. It is a fallacious doctrine that air can or should be excluded from the middle ear in this manner. Air will gain access to this cavity through the Eustachian tube and furnish pathogenic germs. Free drainage should be maintained through the canal built by Nature, in order to avoid a complication of the existing trouble with mastoid disease. Moreover, it is problematical whether one ever thoroughly cleanses the middle ear of pus by this dry method, even if the perforation be an unusually large one. The cotton is not likely to enter the tympanic cavity and it is not desirable to have it for there would be danger of entangling the ossicles in its meshes and dislocating or removing them.

The most rational and successful treatment I have tried is the following: Cleansing the external meatus and middle ear thoroughly with injections of a 1-10,000 solution of mercuric bichloride; inflation by the Politzer method, or catheterization; iodine vapor if stimulation is required; drying the part with absorbent cotton and dusting them with finely pulverized boracic acid containing ½ of 1 per cent. of mercuric bichloride, or if this should cause any unpleas-

ant sensation, iodoform or boracic acid may be substituted.

Hydrogen peroxide is valuable for cleansing the ear when there is a large amount of debris present in the form of pus mixed with epithelial scales, or cheesy concretions. In addition to its excellent mechanical effect due to effervescence, the oxygen liberated destroys bacteria. The latter result is also effected by the sublimate solution which in one-half the strength mentioned will destroy bacteria in ten minutes. The inflation ought to expel the fluid contents of the middle ear. In cases of brief duration iodine is not required, but in very old cases, when the vital forces seem to have lost their powers of recuperation and resistance to pathogenic germs, tissue changes—the process of absorption and nutrition—may be favorably influenced by the judicious use of iodine vapor. Drying the parts before dusting them with the powder leaves the patient more comfortable than the chilling effect of evaporation does. The powder when slightly wet becomes hard and produces a feeling of stiffness, and sometimes of soreness. Then if the powder be left dry we are enabled to determine at once when the discharge ceases.

It is not necessary to fill the ear with powder. If enough be insufflated to barely cover the suppurating membrane. all is accomplished that can be expected from the remedy, and the functions of the ear are not materially interfered with—an important consideration with many patients. This treatment leaves no obstruction to free drainage, and in no manner invites mastoid trouble. When the disease has just passed from the acute to the chronic stage the boracic acid powder had better be used without the bichloride, for the latter may cause some disagreeable crackling sensations and even pain. But in the strength mentioned it is not likely to do so unless there is considerable inflammation.

At the meeting of the Illinois State Medical Soci-

ety, held in this city three weeks ago, the efficacy of iodoform as an antiseptic was called in question. While the experiments of Heyn and Rovsing, of Copenhagen, show that iodoform is inert in the presence of bacteria while the remedy remains in a dry state, de Ruyter has proved that iodoform in the presence of the fluids of suppurating surfaces undergoes chemical decomposition during which new iodine compounds are formed. The splitting up of the iodoform, its partial solution and absorption, resulted in the destruction of the ptomaines, the product of pathogenic micro organisms, and hence the arrest of pathological metamorphosis. The laboratory thus confirms the practical conclusions which years of experience have forced upon the profession. In conclusion, let me add in support of the method here outlined, that no routine treatment has ever yielded the uniformly satisfactory results in my hands that this has. Were there time to enter into more minute details it would be interesting to consider the variations of treatment required by necrosis, etc., but that would extend beyond the scope of this paper. Numerous illustrative cases might be adduced from my records, but I will mention but one that I have now under observation, in which the hearing was nil from chronic non-suppurative inflammation of the left middle ear, and the voice could be heard only by shouting in the right ear, in which chronic suppurative inflammation had existed for over forty-nine years. I removed from both nostrils large polypi, which had prevented nasal respiration for twelve years. The treatment I have described stopped the discharge in four days, and subsequent catheterization, etc., restored some hearing in the left ear, and so improved the right as to render conversation audible at a distance of fifteen inches.

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