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PARASITIC GROWTHS IN THE EXTERNAL MEATUS.

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THE subject of parasitic diseases of the human ear has been so thoroughly investigated by recent observers that very little apparently remains to be said concerning either their origin or symptoms. Of five cases which have come under my observation, the two following only are reported as presenting some variations from the conditions which Wreden and others, both in Europe and in this country, have taught us to consider as characteristic of this affection. On p. 37 of his paper, entitled "Die Myringomykosis Aspergillina," the author says, that although the frequency of the simultaneous appearance of the *Penicillium glaucum* and *Aspergillus glaucus* are well known, he has not been able, notwithstanding the most careful examination, to detect in any one of his fourteen cases either a pure bastard example of *Penicillium*, or one resulting from copulation with *Aspergillus*.

It is with reference to this statement of Wreden's that the following case possesses its particular interest.

A. B., aged 24, a medical student, consulted me in the latter part of February, 1870, in regard to a simple catarrhal inflammation of the middle ear. The patient was of a full habit, in good health, and had had no previous aural trouble. Aside from the usual appearances, the integument of the meatus on both sides was dry, and slightly reddened throughout its whole extent. Finding relief from the trouble in the middle ear, the patient passed from observation; but returned in April, complaining of sensation of fulness in the ears, tinnitus aurium, diminution of hearing, and an intense itching and prickling at the inner end of the meatus. An examination with the speculum revealed unmistakably a mass of *Aspergillus nigricans* covering the membrana tympani, and filling the inner end of the meatus, the left ear being much more seriously affected than the right. Syringing brought away from each ear a compact mass

of mycelium and fully developed sporangia, leaving the membrana tympani and inner end of the meatus reddened, moist and swollen. The usual treatment by means of syringing and the instillation of parasitocides was continued daily for about a month, at the end of which time the growth seemed to have been exterminated, and the patient left the city for a week. During his absence the syringing was omitted, but he was in the habit of moistening the entrance to the meatus for the purpose of relieving an unpleasant sensation of dryness.

At the end of a week he returned, complaining of a renewal of the symptoms in the left ear, characteristic of the presence of *Aspergillus*. Examination showed the inner end of the meatus filled with this growth, which also extended outward along the walls of the meatus to within half an inch of the entrance, at which point it was continuous with a yellowish-white lardaceous layer covering the remainder of the wall of the passage. The whole deposit was removed by careful syringing. That portion taken from the membrana tympani and inner end of the meatus, and examined under the microscope, was unmistakably a pure *Aspergillus nigricans*, while the yellowish-white layer from the outer part of the meatus, and especially that portion of it near the point of termination of the true *Aspergillus* growth, presented appearances which certainly differed from those by which we distinguish *Aspergillus*, and which would hardly permit it to be classed with any of the varied forms of *Penicillium*. It resembled more nearly some of the specimens of bastard *Penicillium* figured by Hallier.



The specimen represented in the accompanying wood-cut exhibited a mycelium and fully developed sporangia (a). The

spores, of which a collection is represented at *b*, were of a brown color and oval outline, of about the same size as the spores of *Aspergillus nigricans*. Under a magnifying power of 300, some of these spores showed a double outline. Mingled with this growth there was a close network of very fine mycelium.

A portion of this same specimen planted upon lemon-peel, and placed in a closed glass vessel at a constant temperature of 80° F., gave at the end of three days a well-developed growth of the *Leptothrix* form of *Penicillium*. A number of the spores placed in glycerine, and maintained at the above temperature, at the end of a week showed many of the spores swollen and elongated, and exhibiting much the appearance figured by Hallier in his work on parasitic plants. Pl. IV. figs. 5 and 7 (*Aspergillus glaucus*).

On p. 78 of the above work, Hallier mentions that *Aspergillus* requires a drier soil for its growth than does the *Penicillium*.

In the present case, the first growth was purely that of *Aspergillus nigricans*, confined to the inner portion of the meatus, while the new growth sprang from a surface which was repeatedly moistened, and which was, moreover, freely exposed to the air. Although we are not able to determine the precise condition of the meatus which is fitted to the nourishment of the parasitic plant, the circumstances in this case would certainly seem to have been favorable to the development of *Penicillium*, and subsequently in connection with the earlier crop of *Aspergillus*, of a bastard growth.

The second case is a comparatively simple one.

C. D., aged 68, a carpenter by trade, presented himself at the aural clinic of the Mass. Char. Eye and Ear Infirmary in May last. He complained of a feeling of fullness, tinnitus aurium, and loss of hearing in the left ear, together with an occasional slight prickling sensation at the inner end of the meatus. These symptoms, with exception of the prickling, which had been noticed only within a few days, dated back about three weeks.

The watch was heard distinctly when placed upon the temple and behind the ear, but very slightly at a distance of one-eighth of an inch from the ear. Examination showed the inner end of the meatus impacted with dry cerumen largely mixed with epidermis, and covered with a light brownish powder, which the microscope showed to be fully developed *Aspergillus flavescens*. With the removal of the ceruminous mass and the accompanying growth, the disagreeable symptoms were relieved, and the hearing increased to nearly the normal standard.

As a matter of precaution, the patient was directed to return on the second day. He did so, and reported no return of the former symptoms. The examination, moreover, gave no indication of a renewal of the growth, and the patient did not again present himself.* The plug of cerumen being placed in a glass stoppered bottle, soon became covered with a luxuriant growth of *Aspergillus flavescens*; but subsequently, the specimen having been exposed to the air, this was replaced by a still larger growth of *Penicillium*.—*Transactions of the American Otological Society*.