

Itching in the Ear Canal Due to Hypocerumenosis

An Effective Method of Treatment

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ITCHING IN THE EAR CANAL with local oozing, edema and cracking of the skin that is not ascribable to either fungous or bacterial infection often is associated with a less than normal production of wax. Many methods of treatment for this distressing condition have been reported, but on the whole the results have been poor to mediocre.

The present communication is to discuss observations that may be helpful in diagnosis and to report a therapeutic regimen that relieves the itching, heals the lesions and may restore normal excretion of the lipid covering which many investigators consider a protection against infection of the skin or the canal.

The secretion covering the surface of the external canal epithelium is formed primarily by the sebaceous and apocrine glands in the outer third of the canal. The large and usually active sebaceous glands pour fatty secretions onto the surface of the skin as they do in the scalp and postauricular regions. A less viscous, chemically complex pigmented wax is produced by the apocrine glands. Oxidation, epithelial detritus, dirt and dust give the cerumen its characteristic color.

Some investigators⁵ believe that this "lipid cover" acts as an important agent in preventing maceration of the skin and entrance of bacteria into the corium. Gill¹ advanced the idea that the cerumen of the ear provided an antibacterial "acid cloak" which he considered essential to the maintenance of a healthy ear. He demonstrated that the pH of the cerumen in a normal healthy ear is slightly acid, whereas in 90 per cent of the infected ears the cerumen is alkaline. Other observers^{2,3,4} have expressed the opinion that the absence of cerumen in the external auditory canal predisposes the canal to infection. The relation between bacterial and external otitis is vague. Occasionally, bacteria are the direct and complete cause, and anti-bacterial therapy, as indicated by culture and sensitivity tests, effects immediate recovery. Sometimes bacteria play only a secondary role in the production or protraction of external otitis and anti-bacterial therapy produces

• Itching of the ear canal, with oozing, edema and cracking of the skin due to absence or insufficiency of wax was treated in more than 200 cases by instructing the patient to massage the ear canal with a cotton tip applicator soaked with a hydrocortisone preparation and inserted a half to three-quarters of an inch beyond the meatus.

Some 95 per cent of patients reported good to excellent results in three to four days after the beginning of treatment. In the remainder results were fair.

a poor response. This may be due to the poor lipid protection of the canal.

Almost all physicians have been questioned about the plethora of wax in the ears of some people and, at the other extreme, a complete absence of the material in others. Either *asteatosis* or *hypocerumenosis* is an appropriate epithet for this latter condition. But as to the question, "Why don't I form wax in my ears?" I feel that the simplest explanation to the average patient is to draw a comparison with perspiration: Some people perspire more freely than others. This usually avoids more detailed physiological explanations.

Histologically, acerumenosis is associated with hyperkeratosis, parakeratosis, acanthosis with intercellular and intracellular edema and keratinized material in the apopilosebaceous orifices. The apocrine glands are often surrounded by an inflammatory process with an infiltration of lymphocytes and leukocytes. In general, the glands seem to be atrophic and decreased in size, their epithelium giving the appearance of not functioning. Sometimes the apocrine glands may be completely destroyed.

For some reason unexplained—except perhaps that they have read a magazine article about fungous infection or have misinterpreted a chance remark by a physician—many patients with itching and the visible symptoms of the kind described come to an otologist with a self-diagnosis of "fungous disease." Although careful differentiation is necessary, usually it is not difficult to determine that the itching is due to hypocerumenosis rather than to severe reactions to mycotic or bacterial infection, which for the most part are distinctive and readily identifiable. Sometimes, however, cultures may be necessary if doubt remains.

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History-taking may provide clues that will help establish that the itching in a particular case is due to hypocerumenosis. A history of excessive washing of the ears—often with the deliberate aim of removing wax—or of swimming, which tends to douche the ears, or of picking at the ears with tooth-picks or hairpins, can alert diagnostic suspicion. Since emotional stress is believed sometimes to play a part in asteatosis, it should be taken into consideration in taking a patient's history.

Particularly important are duration of symptoms and a history of tendency to remission and exacerbation. Along with examination of the pinna, post-auricular tissue and scalp, the skin of the rest of the body should be inspected. One should look for excoriations and lichenifications—indicating the patient has been scratching—and for oozing and crusting, fissures, hyperemia or erythema. Dermatitis elsewhere and the relation of dermatitis in the ear to remission and exacerbations of dermatitis elsewhere are also important. The picture of acute eruption suggests contact dermatitis, infections, eczematoid dermatitis, or bacterial infection, psoriasis, seborrheic dermatitis and neuro-dermatitis. (It is recognized that the problem of intense itching associated with neuro-dermatitis in psychosomatic problems needs more investigation.)

Treatment

Among a variety of treatments for itching in the ear canal is the application of boric acid solution or alcohol or gentian violet with a dropper. This method, although it may dry the weeping skin, has the deplorable disadvantage that it also washes away the already depleted lipid cover. Results with the use of salicylic acid ointments, cade oil, iodine, antibiotics and acetic acid preparations and the injection of calcium gluconate intravenously and parathyroid extract hypodermically—all have been, in general, less than satisfactory.

In more than 200 cases in a period of two and a half years I prescribed a simple method of treatment which the patient may administer himself, and a high proportion of the patients had good results.

Contrary to the classic warning against inserting anything into the ear canal, I instruct the patient to soak a cotton tip applicator or Q Tip in a Cort Dome®* lotion, 0.5 per cent strength, and then to

*The preparation combines hydrocortisone and an exclusive acid mantle vehicle. It is made as an ointment or a lotion with different hydrocortisone strengths—0.5, 1.0 and 2.0 per cent.

insert the tip about a half or three-quarters of an inch beyond the meatus and liberally rub the lotion into the canal walls, the meati and the concha. This should be done for about a minute in each canal twice daily, and the patient is told to continue the treatment for several days after all itching has subsided.

A specific warning is given not to instill the lotion into the ear, for it has been found to form an emulsion-like layer over the external surface of the ear drum, impairing the hearing.

The patient is told that the condition of the skin in his ear canal may necessitate either constant daily use or occasional periodic use of this application. After the acute exacerbation has subsided, the patient is told to resume the treatment whenever the first sensation of itching develops, the frequency being left up to him. If the condition of the ear at later reexamination indicates a superimposed infection, a similar preparation with topical neomycin (Neo-Cort-Dome® lotion) is prescribed for application in the same manner.

Results

Some 95 per cent of more than 200 patients who had hypocerumenosis with symptoms reported good to excellent results were obtained in three or four days with this treatment. Itching stopped, oozing and edema diminished and the skin began to heal. In a few cases a scant amount of cerumen eventually developed. In the remaining 5 per cent of cases the results were fair, the lesser benefit probably being attributable in some degree to chronic eczema with irreparable damage to the apocrine sebaceous glands.

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