Psychological Factors in Severe Disabling Tinnitus

I read with interest the article by Araújo et al[1] titled "Intratympanic Dexamethasone Injections as a Treatment for Severe, Disabling Tinnitus," which was published in the February 2005 issue of the ARCHIVES. The authors are certainly right to state that severe disabling tinnitus is an intense symptom and can produce high annoyance levels. They point out that it is mainly the affective component that "alters the patient's routine and makes him or her unable to perform daily tasks efficiently."[1] That the paradoxical memory for severe tinnitus may have to do with the affective side of the symptom, as hypothesized by Shulman et al[2] and further corroborated by neuroimaging studies of an involvement of hippocampal structures,[3] may make possible a "final common pathway for the sensorial and affective components of SDT [severe disabling tinnitus],"as discussed by the authors.[1] Lockwood et al[4] have suggested that there may be a crossover between the auditory system and the limbic system in patients with severe tinnitus.

I note that Araújo et al[1] included patients with chronic tinnitus in their study (only 4% had tinnitus for less than 1year). It is a pity that they did not try to catch the affective component of the chronic symptom of complex tinnitus by evaluating the affective state of their patients. In a recent prospective study[5] performed on 50 patients with acute tinnitus, my colleagues and I found that patients with psychological disturbances and sleeping difficulties on first presentation shortly after the onset of tinnitus have a higher risk of developing tinnitus-related distress. Rather than expecting dexamethasone therapy to alleviate tinnitus-related distress, physicians should try to evaluate psychological methods to reduce anxiety and depression in patients with severe tinnitus. Furthermore, studying the psychological states of Araújo and colleagues' patients may have shown specific differences of patients who responded to the specific and the control treatment and who did not, and, thus, contributed more insight into the phenomenon of the "placebolike" improvement. My coworkers and I intend to investigate early psychotherapeutic interventions and other treatment modalities in patients who present with tinnitus and who are anxious and dissatisfied with their life as well as those who have insomnia that they attribute to tinnitus.

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In reply

We thank Dr Langenbach for his interest in our article and for giving us the opportunity to further discuss our results. Of the 31 patients who were included in our analysis, only 2 (1 man and 1 woman) had psychiatric symptoms (depression and anxiety), and they were being followed up by the Department of Psychiatry at our hospital. They did not report any change in their tinnitus after intratympanic injections of either dexamethasone or saline solution. None of the other participants (n=29) had any psychiatric complaints. All patients included in the study had otologic diagnoses that are commonly associated with tinnitus (see Table 2 and Table 3 in our article). Five patients had otosclerosis and 4 had Ménière's disease (endolymphatic hydrops), which are major cochlear histopathologic diagnoses in patients with tinnitus.[1,2]

At the present time, we believe that tinnitus originates in the cochlea in the great majority of patients. Of 500 cases of tinnitus collected from our otology clinic over a period of 6 months, 81% demonstrated mild symptoms that hardly bothered the patients, 18% demonstrated easily controllable symptoms, and only 1% demonstrated severe disabling tinnitus (SDT).[3]

Shulman et al[4] presented evidence for the development of a paradoxical memory for SDT in the area of the medial temporal lobe system and postulated a common final pathway for the sensory and affective components of the symptom. This theory, we believe, explains the degree of annoyance caused by SDT from a neuroscientific standpoint. By pioneering the study of SDT using neuroscientific thinking, Shulman and colleagues certainly changed the way most people previously thought about SDT.

In summary, we believe that while mental disease can definitely increase the problems experienced by patients with SDT, it does not cause the condition and, indeed, is absent in most patients with SDT. However, when mental disturbances are present in patients with SDT, they must be identified and treated.

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Fungus Sensitivity as a Cause of Ménière's Disease?

I submit observations from personal experience with my own Ménière's disease and report anecdotal case studies of my patients to seek corroboration from your specialty.

As an ophthalmologist, I frequently evaluate patients for a possible ocular contribution to "dizziness" symptoms that seem vertiginous. Review of systems almost always discloses a history of chronic sinus congestion, postnasal drip, frequent or chronic sinusitus, and/or allergies. One commonly affected group seems to be pilots and flight attendants. Often, their symptoms match the kind of vaguely "seasick" feeling I experience intermittently between true vertigo bouts with Ménière's disease.

Relying on the work of Ponikau et al[1] on possible fungal causes of chronic sinus disease and studies such as that of Tumarkin,[2] which supports eustachian tube dysfunction as a contributor to Ménière's disease, along with my own experience of delayed equalization on the affected side associated with seasonal and/or allergic timing of Ménière's disease attacks, I propose that Ménière's disease (or at least a Ménière's-like condition featuring variable symptoms of recurring vertigo or mildly vertiginous sensations) might be influenced by nasopharyngeal hypersensitivity to fungi leading to eustachian tube dysfunction, or possibly by direct fungal colonization of the middle ear provoking local hypersensitivity as well. Treating myself and 6 affected patients with 0.01% amphotericin B in a compounded nasal spray (off-label use) has led to apparent relief of the symptoms in all 6 patients and seems to have reduced my own symptoms. (My tinnitus and hearing loss are unaffected, but my vertiginous symptoms have decreased.) I have yet to have my middle ear irrigated with the amphotericin solution but am interested to give it a try.

I am curious if any in your specialty have similar suspicions, experiences, or interests to support or contradict this idea.

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