
Tinnitus and Depression

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I'm going to recount to you some data from others and a little from our own group. None of this is very new.

The subject of depression has been brought up and I think it is important. 5% of the people in your waiting room, no matter what kind of medical practice you have, have a current major depression, and, if your waiting room is full of tinnitus patients, the percentage is certainly higher.

Major depression, clinical depression is like the common cold of psychiatry although I don't mean to trivialize it; it is sometimes a fatal disorder in terms of the substrate for suicide. It's more than just being sad, it is a dysphoric, sad, unhappy mood that is persistent, strong, predominant and lasts at least two weeks and is associated with symptoms other than just the sad mood—e.g. appetite changes, sleep changes. I will agree with the others that sleep disturbance and tinnitus is really a crucial clinical sign to us as otologists. Agitation or psychomotor retardation, loss of interest or pleasure are important to remember.

We did a study with Mark Sullivan and Wayne Katon in the Psychiatry Department when I was at the University of Washington and found that in our waiting room about 5-7% of our control patients who were general otologic patients, had a current major depression; and 21% of them had a depression sometime in their lifetime. This is very similar to what you get in any general medical practice. In our tinnitus research clinic patients, and this was not just people walking in off the street with ringing in the ear but people who have been through a negative otolaryngologic examination at some time and then referred on to what was then a tinnitus research clinic, 60% had a current major de-

pression and 80% approximately had that in their lifetime at sometime. The association of depression with severe tinnitus, tinnitus that was disruptive, was a strong one. John House spoke of the 95% who were not bothered and 5% who were very bothered. It's that 5% who are particularly likely to be depressed and when we did a survey, called the chronic illness problem inventory, which appraises the degree of difficulty people are having in 18-19 domains of life (sleep, sexual activity, appetite, physical activity, work, etc.), the non-depressed tinnitus patients were really the same as our controls. But our depressed tinnitus patients were the ones having difficulty in almost every domain of life. This issue has been raised before and I promised you that there would be no verbal discussion of tinnitus mechanisms so I won't even attempt to answer this, other than to say that the majority of our depressed patients had had during some time in their life a major depression prior to ever having experienced tinnitus, at least on a frequent basis. In our study population our experience led us to the conclusion that the people who get really distressed and depressed with tinnitus are people who have a predilection, whether genetic or acquired during life, to depressive episodes.

There have been positive and negative studies in the literature regarding the efficacy of anti-depressants for helping people with tinnitus. A study in 1988 in the *Annals* was essentially a negative study. We had questions because first of all the sample size was small and the severity was unclear. It appeared that they may have taken patients who really were not that bothered by their tinnitus and put them into the study which, I think, diluted and weakened the findings. At any rate it was a well designed study.

We did again a study with Mark Sullivan, Wayne Katon and the Psychiatry Department. We had 92 patients who all had severe tinnitus. They had Iowa scores that were very high. They had high disability scores. We chose to include only the severest cases. This was a randomized trial with dose adjustment. With Nortriptyline and the other tricyclics the dose can be important. And if you just give everybody 25 or 50 mg you are going to

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wind up overtreating some and undertreating others, and with side effects. We went through a dose adjustment period with both the active and placebo drug. In the placebo group the physicians were being given plausible but fake blood levels on which to adjust the dosage. We asked patients at the end of a 6-week trial after dose adjustment and stabilization a number of questions concerning the global benefit and if the medicine had helped them. Two things to notice. First of all there is a highly significant difference between the success rate with Nortriptyline and the one with placebo. Second is the good success rate with placebo.

I do believe and I suspect we all believe that the therapeutic interaction of a caring clinician with the patient is itself treatment. To call it placebo perhaps unfairly demeans what is a very real aspect of treatment. We found that the clinical indicator, at the beginning, that best predicted who would be helped and who would not be helped by Nortriptyline was very simply insomnia. If patients had sleep disorder they were more likely to be helped. Again, to underline placebo effects, if we look at the Iowa disability scores before and after, if our treatment were completely ineffective the results would cluster on the diagonal, that is, the pre-treatment and post-treatment scores being the same. In fact as you can see most scores improved after the trial but this was true for both active and placebo. It is true that the active patients improved more, but placebo effects were often very strong.

There has been another study recently reported from Europe similar to ours, Amitriptyline rather than Nortrip-

tyline and placebo control. They had a severity score that was heavily weighted toward sleep disturbance and they had much lower success rates than we did, but again the difference between our study and this study may have had to do with the questionnaires or instruments they used. But the difference again was significant between drug and placebo. The conclusion that we came to and that I think is still true, is that the placebo effects are important in tinnitus treatment. I've learned over and over again that if I am too negative in my first interaction, this has a bad effect on the patient. If I say things like we don't have a drug or a surgery to turn off the tinnitus, as true as that is, if that is the first thing that comes out of my mouth, it kind of sours the whole interaction. I think it is better to be helpful and say we have got a number of things that might help you if it is really bothering you. Nortriptyline was better than placebo. The best predictor was insomnia and again this has been underlined before. These results are only applicable to the patients who are being really bothered by their tinnitus. I do not very often use an antidepressant myself. I tend to have their primary care physician or a psychiatrist do this. My psychiatric and primary care colleagues report that they have equally good results with the newer antidepressants such as Prozac, for example. Again, if you are going to do this yourself which you may want to do; and if you use tricyclics, you've got to use a vigorous regimen. Most of our patients in our study ended up needing as much as 100 mg of Nortriptyline at bedtime. This is another reason why some studies are inconclusive.