

Assessment of Tinnitus

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Tinnere (latin) for "ringing"

Tinnitus is the complaint of noises in the ears



It may be constant, intermittent and usually varying in character and intensity

It is more apparent in quiet surroundings

It is aggravated by fatigue, anxiety and depression

It is physiological - a symptom rather than a disease

It is threatening to the patient!

Objective or subjective?

- Objective tinnitus (5%) can be heard by others
- Subjective tinnitus (95%) is just experienced by the patient

- Check with the stethoscope over the ears, mastoid, skull bone and sides of the neck

Take a thorough history

- Take the patients fears and complaints seriously
- For many sufferers, tinnitus is quite threatening
- Try to estimate the degree of disturbance from the tinnitus

Use a Tinnitus questionnaire

- Tinnitus is a self-report phenomenon
- Tinnitus questionnaires can help identify individuals who are particularly bothered and need a quick intervention
- Questionnaires can be used to evaluate treatment efficacy
- The Tinnitus Handicap Inventory, THI according to Craig Newman is a suitable 25-items questionnaire with 0 – 100 points score

(Arch Otolaryngol Head Neck Surg 1996;122:143-8)

Degree of disturbance

(according to I. Klockhoff – Uppsala, Sweden)

- Grade 1. Audible only in a silent environment
- Grade 2. Audible in normal acoustic environment
Can be masked by other sounds. Can slightly delay falling asleep
- Grade 3. Audible in all acoustic environments
Disturbs the sleep a lot and is the dominating problem in the patient´s life

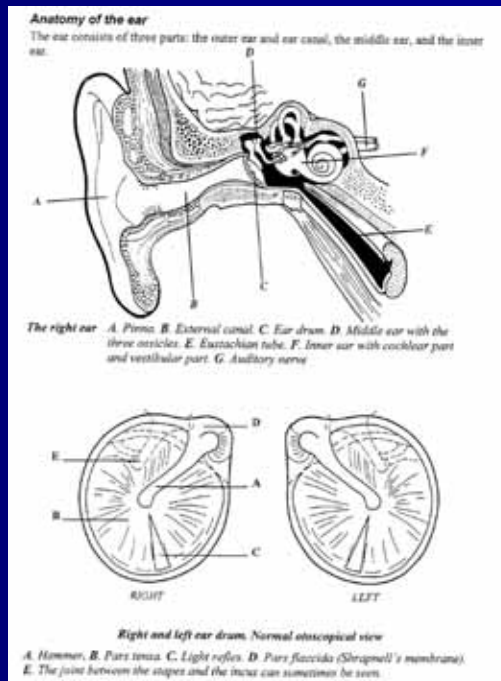
Grade 1. Examination and explanation – no treatment

Grade 2. Examination and explanation (treatment?)

Grade 3. Examination, explanation and treatment

Management

- Examine the ears and the hearing
- Explain to the patient



Consider a tinnitus analysis

- Record the tinnitus sounds on a tape and give it to the patient



The tape may be used by the patient to make the sounds audible to others

It usually makes the patient feel good to share the sound with relatives and others

Fit a hearing aid

- If the tinnitus patient is also hearing impaired a hearing aid may be helpful in reducing the tinnitus as well as relieving the hearing loss



Masking

- If the patient is kept awake by tinnitus at night suggest masking by a radio, CD-player or I-pod player. Cushion loudspeakers are also available
- There are special CD´s and tapes available for tinnitus sufferers with pleasant sounds, distractions and relaxation techniques

Other suggestions

- Check the patient's drug list. Discontinue drugs that can cause or enhance tinnitus (e.g. aspirin and NSAIDs)
- Warn against alcohol and nicotine abuse
- Caffeine (coffee, coke and tea) can enhance tinnitus
- Reduce the salt intake (<1 g/day) – especially if endolymphatic hydrops is suspected

Physiotherapy and check-up with the dentist

- Refer the patient to a physiotherapeut if there are any complaints from the neck, shoulders or musculature in the head and neck area
- Refer the patient to the dentist for a check-up of the jaw muscles and for examination of any TMJ problems

Depression



- Many tinnitus patients are depressed and their quality of life is reduced
- Referral to a psychiatrist/ psychologist or tinnitus expert who can treat thoroughly and expertly is advisable
- Cognitive therapy works well
- Most important is the reassurance that the tinnitus does not indicate a serious disease

Tinnitus Retraining Therapy

– TRT (Jastreboff P.J. 1990)

- The reaction to tinnitus is what creates the distress
- One goal with TRT is to reduce or eliminate the unpleasant feelings tinnitus creates (with professional counselling) - to let tinnitus lose its negative meaning – *habituation of reaction*
- TRT retrains the subconscious auditory system to accept the tinnitus – any continuous stimuli results in less and less response (*habituation*)
- Two wearable sound generators (white band noise) are used at low intensity so that the tinnitus can still be heard at the same time
- Slowly tinnitus signals will be reduced and finally not detected – *habituation of perception*

Everyone has tinnitus!

- Explain to your patient that also normally hearing and tinnitus free individuals will have tinnitus in a sound proofed room
- It is, thus normal to detect a background electrical activity in the auditory pathways as a sound
- It is when the patient reacts to it as a threat that it will become an annoyance and a distressing tinnitus sound

Last but not least

- Remember that taking care of the tinnitus patient is a severe test of a doctor's art
- The better you do it – the more you can help!
- Tinnitus assessment is tinnitus treatment!

GOOD LUCK!



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