Tinnitus
Pharmacotherapy
What’s been tried

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Disclosures

• The author of this talk has nothing to disclose
• Off-label use of medications will be discussed
• The views expressed here are those of the author and not the University of Miami or the Department of Defense
Tinnitus

• One of the most frequent medical conditions
  – One third of adults have or will experience tinnitus
  – 10% of adults have consistent tinnitus
  – 5% have disabling tinnitus
  – These percentage far outstrip other disorders that receive more attention and more funding
Tinnitus - Treatment

• Treat underlying health condition
• Noise Suppression (white noise, hearing aids, tinnitus suppression)
• Tinnitus retraining therapy
• Medications
Medications for Tinnitus

- Benzodiazepines
- Anti-depressants
- Anti-epileptics
- Others
  - Zinc
  - Gingko
  - New generation sleep medicines
Benzodiazepines

- Sedative, hypnotic, anxiolytic effect
- Key agents – Alprazolam (Xanax), Diazepam (Valium), Lorazepam (Ativan), Clonazepam (Klonopin)
- Main uses – anxiety disorders and insomnia
- Side effects – drowsiness and cognitive issues, dependency?
- Long half lives
Benzodiazepine and Tinnitus

- Used to reduce anxiety associated with tinnitus
- One trial showed some benefit from Xanax and one trial showed some benefit from Klonopin
- Most trials showed no benefit
- Rebound effect is a possibility
Anti-depressants

- A class of medicine with a variety of actions used to treat depression and other disorders
- Key agents – SSRI’s (Celexa, Paxil, Prozac), TCA’s (Elavil, Pamelor), SNRI’s (Cymbalta, Effexor), SARI’s (Trazadone)
- Main uses – depression, anxiety, pain
- Side effects – Mania, restlessness, mood issues
Anti-depressants and Tinnitus

• Used to combat depression associated with tinnitus
• Have undesirable side effects (dry mouth, sedation, sexual dysfunction)
• “There is as yet insufficient evidence to say that antidepressant drug therapy improves tinnitus” – Cochrane Reviews
Anti-Epileptic Medicines

• Anti-seizure effect
• Key agents – Carbamazepine (Tegretol), Topiramate (Topamax), Gabapentin (Neurontin)
• Main uses – Seizure disorders, bipolar disorder
• Side effects – drowsiness, dizziness, mental slowness, eye issues, liver issues
Anti-Epileptic Medicines and Tinnitus

• Used because chronic pain is an analog to tinnitus
• No trials have shown any direct benefit on tinnitus
• Topamax is effective in the treatment of vestibular migraines in which tinnitus can be a symptom
Newer generation sleeping medicines

• Used for inability to initiate or maintain sleep
• Key agents - Ambien, Lunesta
• Side effects – dream issues, dizziness
• Use in tinnitus – no proven benefit but can allow sleep if tinnitus is bothersome at night
• These medicines have short half-lives
Zinc

• Dietary supplement and essential element for proper body function
• Uses – just about everything but really only indicated if total body zinc is low
• No proven benefit in trials but may help if zinc levels are low
Ginkgo biloba

- Chinese herbal medicine with a variety of uses and as a food source
- May have benefit for cognitive issue and for dementia
- No proven benefit for tinnitus
Medicines and Tinnitus

• None of these medicines were designed for the treatment of tinnitus
• Any medicine likely has more effects on the rest of the body than the ear
The Fascinating Array

- One single medicine does not work well for most individuals with tinnitus
- Despite population results individual patients may receive benefit from a medicine
- Trial and error can be confusing and frustrating for patients and providers