Forum for Better Medicine, First edition: Adult ear pain

Adult ear pain has many causes

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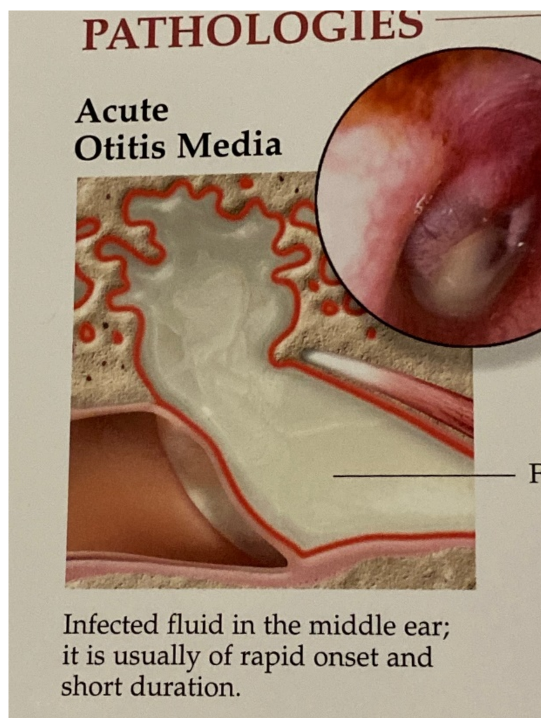
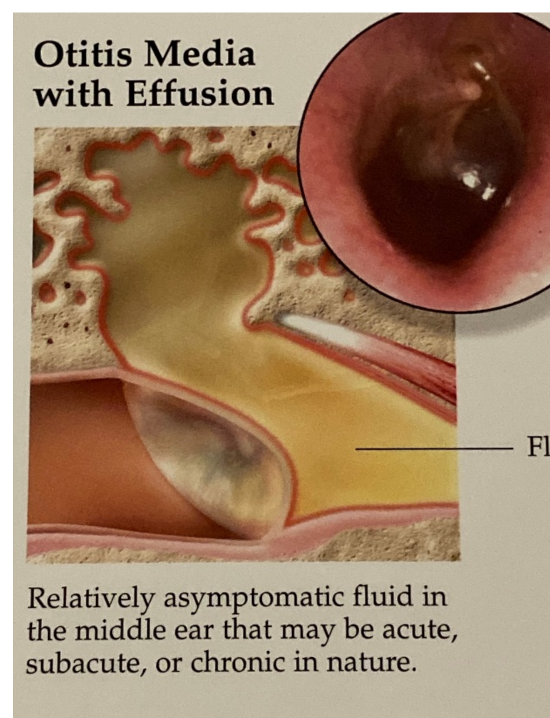
Ear pain/otalgia is a common complaint. We must broaden our differential diagnosis beyond Otitis media and otitis externa. Many patients with TMJ dysfunction are given 1-3 courses of antibiotics for "possible ear infections" when the exam is normal and there is no hearing loss.

See the pictures, common causes and helpful hints on making the correct otalgia diagnoses.

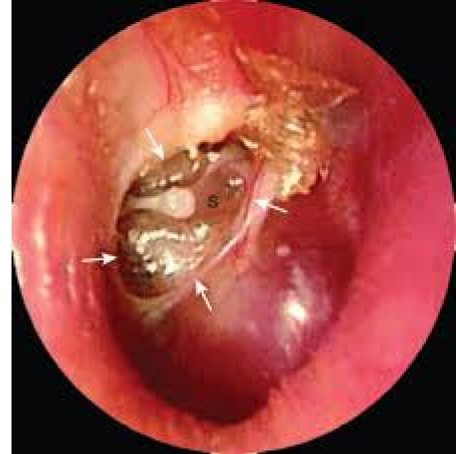
1. Otitis media: commonly follows a URI, has sudden onset of ear fullness, definite hearing loss, sometimes: a fever, ear drainage. Exam: The pinna and canal are not tender or swollen. Otorrhea may be present in the canal. If visualized, the tympanic membrane can be red and bulging or retracted with a serous middle ear effusion. A definite hearing loss can be found with tuning forks or fingernail rubbing.

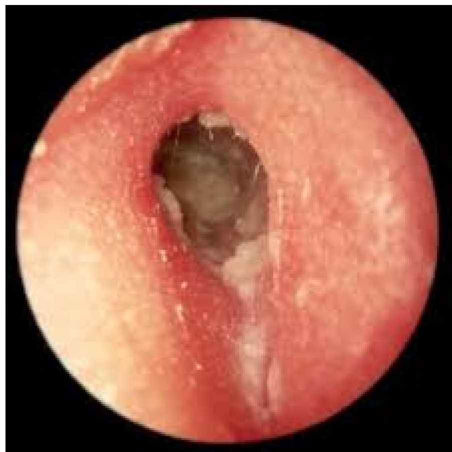
Treatment: amoxicillin (not quinolones), pinching nose and popping ear several times a day to pump air into the middle ear. If a patient returns a few weeks or months later with a serous middle ear effusion and is afebrile then do not prescribe a second antibiotic. If the patient is still febrile, not improving after several days, refer to ENT for possible office myringotomy. If hearing is not improved in 2-3 months, refer to ENT for an audiogram and exam.





2. Cholesteatoma: Usually presents as a posterior superior tympanic membrane perforation with chronic debris, hearing loss. Occasionally has tinnitus, vertigo. Adults will tell you that that ear has a chronic hearing loss, trouble equalizing ears, or chronic ear problems as a child.





3. Otitis externa: more common with diabetics, Q tip users, swimmers. The external canal will be swollen and very painful when pulling pinna. Purulent otorrhea may be present. Afebrile.

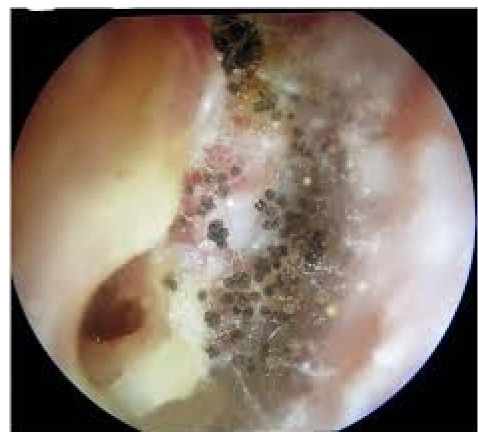
Treatment: Cortosporin or Floxin ear drops. Place otowick if canal is very swollen; remove in 3-5 days. Rarely are oral antibiotics needed. Control hyperglycemia.

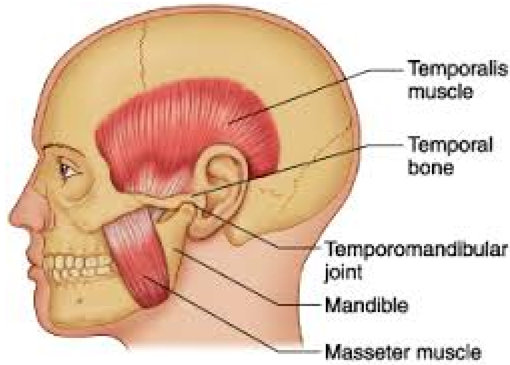
Notes: CT of head is not indicated for otalgia. The middle ear mucosa connects to the mastoid and EVERY otitis media will have mastoid mucosal thickening on CT. Cultures of otorrhea will commonly grow *Pseudomonas*, do not give oral quinolones or IV antibiotics for routine otitis externa. Simple office ear canal suction, ototopical drops with or without an otowick will suffice.

If the patient is not improving after 1-2 weeks, refer to ENT. Ear canal cleaning is essential for any fungal otitis externa. Do not give oral antifungal Rx. Use 1% clotrimazole drops bid for 2 weeks.

4. Fungal otitis externa with obvious hyphae

Treatment: 1. Suctioning fungal hyphae and canal debris, topical 1% clotrimazole solution drops bid for 1-2 weeks. Try to keep the ear canal dry. Do not give oral antifungal Rx.





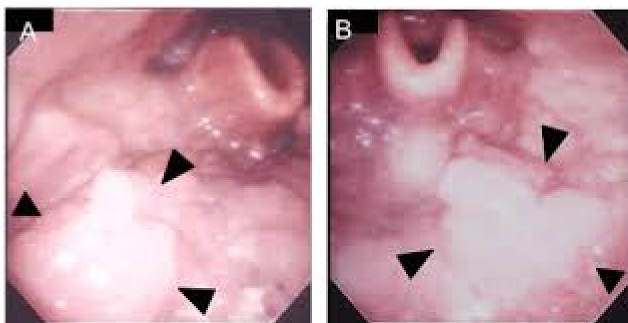
5. TMD (temporomandibular disorders) and degenerative cervical neck disease can account for up to 25% of patients with ear pain. “Referred otalgia” = ear pain with a normal ear examination.

TMJ pain usually presents with chronic, relapsing severe otalgia without any hearing loss, fever, URI. Patients often are hesitant to admit to a previous TMJ diagnosis. Examination: Normal pinna, middle ears, tuning fork tests. Place little fingers in patient’s ear canals and feel for crepitus, asymmetries with patient opening their mandible. Palpate the pterygoid (intraorally) and temporalis muscles for tenderness.

Treatment: refer to DDS for night splint. Try NSAIDS. Do not give “just in case” antibiotics. This is just exposing the patient to *C dificile* risk and reinforcing the patient’s belief that they need antibiotics for their TMJ otalgia. Please encourage patients to wear their night splints.

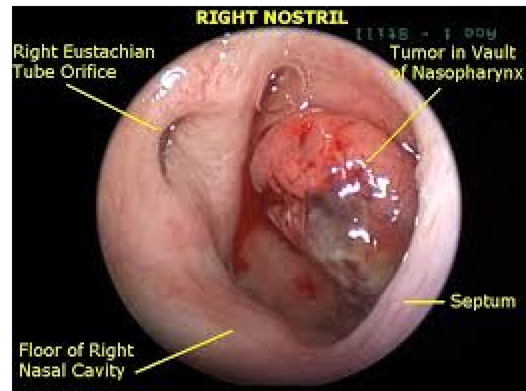
6. Palatine tonsil: Acute pharyngitis, recent tonsillectomy.

Treatment: may use topical OTC Hurricaine or Cetacaine spray for acute pharyngitis. These give better pain control than viscous lidocaine.

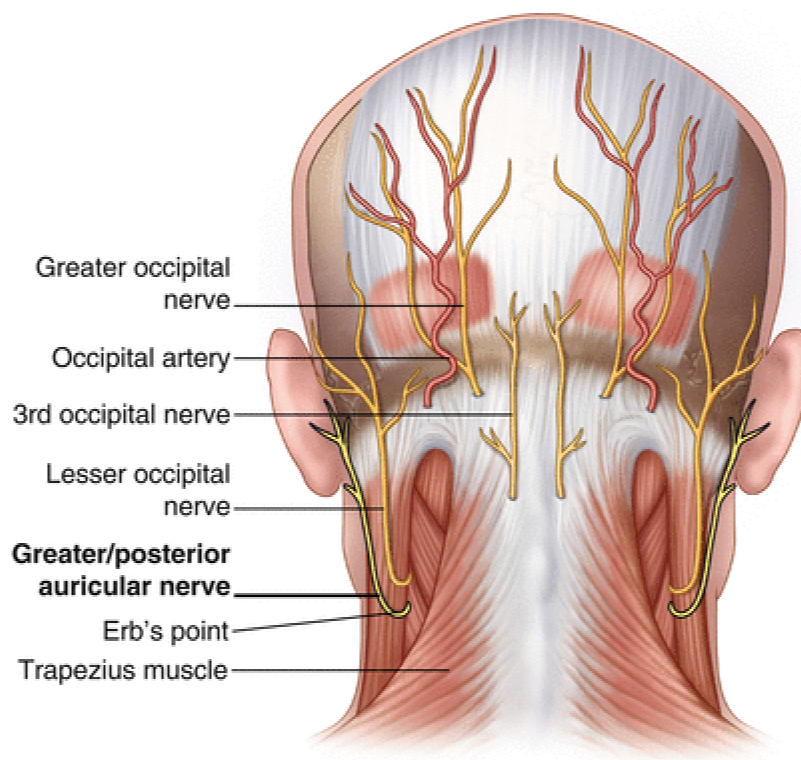


7. Base of tongue/lingual tonsils/supraglottis ulcer or carcinoma: One can palpate the base of tongue and tonsils with a gloved finger; checking for a firm nodule. Send to ENT.

8. Nasopharynx: recent adenoidectomy, rare nasopharyngeal carcinomas present with otalgia and a neck node near the trapezius. ENT will visualize this area with a flexible laryngoscope.



9. Cervical disc disease/muscle spasm, thru the greater auricular nerve/cervical plexus: Tenderness with palpation of the superior posterior neck, mastoid tip area. Follow cervical arthritis treatments: NSAIDs, etc.



10. Ear fullness (aural fullness) is a pressure sensation felt in the ears, and is a very common complaint. Order an audiogram as some sudden sensorineural hearing loss patients complain of a plugged ear more than a definite hearing loss. Some patients with a documented sensorineural hearing loss respond to steroids: either oral or injected into the middle ear if give in the first month. In the absence of physical signs of significant otologic problems or hearing loss it is rarely associated with a pathologic problem but more of a nuisance. A variety of benign non-otologic conditions can contribute to “plugged ears” from headache disorders, water retention (e.g. third trimester of pregnancy), and aging changes. Avoid chronic Sudafed use as it raises blood pressure, and can lead to rebound headaches when patients stop taking drug.