Clinical Pearls from a Case of a Painful, Draining Ear

Neeraj Patel MD, CCFP
Presenter Disclosure

• Presenter: Neeraj Patel

• Relationships with commercial interests:
  • Not applicable/no relationships with commercial interests
Disclosure of Commercial Support

• No commercial support
Mitigating Potential Bias

• Not applicable, given no commercial support/relationships with commercial interests
Learning Objectives

• Review important clinical features to evaluate for a serious complication of ear infections
• Consider the utility of ear culture in cases of otorrhea
• Review the benefit of treating otitis media as a prevention of complications
Case 1: 7yoF

- 7yo F presents initially with 2-3d history of L. ear pain and otorrhea; URI symptoms, fever/chills x 4-5 days, vomiting/diarrhea x 3-4d, now resolved; neck pain, but no neck stiffness; recent return from Florida, did have significant water exposure to ears while there.

- O/E:
  - Afebrile, neck supple, mental status unremarkable; appears uncomfortable, but general inspection grossly unremarkable
  - L. ear canal narrowed, limits visualization of TM; L. pinna tender
  - Small LNs, nontender, unremarkable pharynx
  - Chest unremarkable to auscultation, no WOB

- Dx: flu-like illness + otitis externa

- Conservative management for flu-like illness, locacorten 2 drops TID

- Seen next day in walk-in clinic for new blood-tinge to otorrhea, no other clinical changes; advised to continue same management and f/u with FP in 1 week
1 week follow-up

• f/u for L. otitis externa
• Not improving
• L. sided neck pain
• No fevers, URI symptoms resolved, no n/v/d
• O/E: afebrile, nontoxic, neck supple, patient flexing neck slightly towards painful side
  • Tender L. submandibular LN, but mobile, non-fluctuant; pharynx unremarkable
  • Continued otorrhea observed, unable to visualize TM, tender pinna
  • post-auricular tenderness with significant erythematous fluctuance/swelling; no protrusion of the auricle
• Dx: mastoiditis with subperiosteal abscess
  • sent to peds ER, direct-to-ENT; required IV antibiotics, mastoidectomy, myringotomy tube, I+D of subperiosteal abscess; started on LMWH for intracranial venous sinus thrombosis
Acute Mastoiditis

• Most common complication of acute otitis media
• Clinical findings + CT temporal bone for diagnosis
  • Postauricular tenderness, erythema, swelling, loss of postauricular crease, protrusion of the auricle (80% of cases)
  • Fever (76%)
  • Abnormal TM (82%) – however, often the TM cannot be seen due to external auditory canal swelling
  • External auditory canal swelling/narrowing (71%)
  • Otalgia (67%)
  • Otorrhea (50%)
Clinical Features
Management

- Empiric broad-spectrum IV antibiotics
- Myringotomy +/- Tympanostomy tube  
  - Obtaining middle ear fluid for culture is essential microbiologic investigation
- Management of complications
- Prevention  
  - Most beneficial intervention is Pneumococcal conjugate vaccination (Prevnar-13)  
  - NNT for episodes of otitis media to prevent mastoiditis is high
Pearls

• For pediatric otalgia, remember to examine the postauricular area, particularly checking for tenderness, erythema, and swelling
• EAC culture is not considered helpful for middle ear disease; use in otitis externa might still be appropriate
• The most effective prevention strategy for mastoiditis is pneumococcal conjugate vaccination
• Antibiotic therapy for AOM is not an effective prevention strategy
• Although mastoiditis is a serious disease, most patients can still have a good outcome
References