Review: ear pain and a cloudy, bulging, or distinctly immobile tympanic membrane appear to help diagnose acute otitis media in children


Clinical impact ratings GP/FP/Primary care ★★★★★★  Emergency medicine ★★★★★★  Paediatrics ★★★★★★

Q In children, how accurate are symptoms and signs for diagnosing acute otitis media (AOM)?

METHODS

Data sources: English language studies were identified by searching Medline (1966 to May 2002), scanning bibliographies of relevant studies, and searching general and specialty textbooks.

Study selection and assessment: studies were selected if they examined the accuracy of symptoms and signs in the diagnosis of AOM in children. Studies on the diagnosis of persistent otitis media with effusion were excluded. Studies were assessed for methodological quality including whether there was an independent blinded comparison of signs or symptoms against a criterion standard.

Outcomes: sensitivity, specificity, and likelihood ratios.

MAIN RESULTS

6 studies met the selection criteria. 1 study (43 children) examined precision and found only a fair overall agreement (kappa statistic 0.30) on diagnosis of AOM between paediatric residents and otolaryngologists. 4 studies (total 965 children; age range 0 to 15 y) examined the accuracy of symptoms; in these studies, diagnostic was used as the criterion standard. Using clinical diagnosis as the criterion standard, the presence of ear pain and parental suspicion of AOM may be useful for diagnosing AOM. 1 study (2911 children; age range 6 mo to 2.5 y) examined the accuracy of signs; in this study, tympanocentesis was used as the criterion standard. This study reported the accuracy of signs on pneumatic otoscopy for diagnosing AOM in children (table).

CONCLUSION

In children, ear pain and a cloudy, bulging, or distinctly immobile tympanic membrane appear to be helpful for diagnosing acute otitis media.