Acute otitis media caused by Moraxella catarrhalis: epidemiologic and clinical characteristics.


BACKGROUND: This study describes the epidemiologic, microbiologic, and otologic features and selected signs and symptoms of acute otitis media (AOM) caused by Moraxella catarrhalis and compares them with AOM caused by other bacterial pathogens.

METHODS: Patients aged <5 years with culture-positive AOM from whom a middle ear fluid specimen was obtained and cultured during 1999-2006 were enrolled in the study.

RESULTS: Of a total of 12,799 AOM episodes, 8198 (64%) were culture positive, with isolation of 10,382 pathogens: Haemophilus influenzae, 4982 (48.0%); Streptococcus pneumoniae, 4450 (42.9%); M. catarrhalis, 501 (4.8%); and group A streptococci, 449 (4.3%). The distribution of single versus mixed M. catarrhalis infection was significantly different compared with the 3 other pathogens (165 cases [32.9%] as a single pathogen of all M. catarrhalis AOM episodes vs 3108 [62.4%] in AOM caused by H. influenzae, 2592 [58.2%] in AOM caused by S. pneumoniae, and 304 [67.7%] in AOM caused by group A streptococci; P < .001 for all comparisons). In multivariate analysis, M. catarrhalis AOM was more frequent in patients experiencing their first AOM episode versus recurrent AOM and mixed infections. M. catarrhalis AOM was associated with lower proportions of spontaneous perforation of tympanic membrane compared with all other pathogens. None of the AOM episodes caused by M. catarrhalis was associated with mastoiditis.

CONCLUSIONS: Compared with AOM caused by other pathogens, AOM caused by M. catarrhalis is characterized by a higher proportion of mixed infections, younger age at diagnosis, a lower proportion of spontaneous perforation of the tympanic membrane, and no mastoiditis.

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