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Antimicrobials: Antibiotic usage

Assessment of the antibiotic content of prescriptions for acute tonsillitis prescribed by primary care family physicians in Turkey throughout the year 2012

F. Isli¹, E. Sakalli¹, A. Alkan¹, H. Gursoz¹, A. Sahin¹, Y. Kindap¹, C. Seckin¹, K. Tezcan¹, M. Aksoy¹, P. Gobel¹

¹Department of Rational Drug Use and Drug Supply Management, The Ministry of Health of Turkey/Turkish Medicine and Medical Devices Agency, Ankara, Turkey

OBJECTIVES

Irrational use of antibiotics may have important consequences such as antibiotic resistance that is an emerging global issue so it needs efforts to improve. Assessment of antibiotic use is an important tool to provide feedbacks both for physicians, non governmental and governmental organizations and enables opportunities to discuss and prepare evidence based strategies to extensificate rational antibiotic use. Acute tonsillitis is a frequently encountered disease for which antibiotic prescriptions and irrational antibiotic use are frequent. In this study we aimed to assess antibiotic prescribing habits of family physicians in Turkey by evaluating country wide prescriptions prescribed in primary care throughout 2012.

METHOD

E-prescription data of Turkish Family physicians in the year 2012 were obtained by Family Physician Information System (FPIS) and all prescriptions that have the sole diagnosis of acute tonsillitis were evaluated retrospectively by Prescription Information System (PIS). We have calculated the proportion of antibiotic containing prescriptions, the number (as prescription items) and the cost of antibiotics prescribed according to ATC classification. Also we have assessed injectable forms of antibiotics in prescriptions. For the cost analysis, we used drug resale prices for the year 2010.

RESULTS

It was shown that in the year 2012, 42.25% of all visits to primary care family physicians in Turkey were resulted with prescriptions (112,327,089 prescriptions). Among these prescriptions, those with the acute tonsillitis diagnosis (as only diagnosis) were constituting 11.86% (13.323.611 prescriptions) of all prescriptions. 79.58% of these prescriptions were containing antibiotics and 4.69% of all acute tonsillitis prescriptions were containing injectable antibiotic forms. Antibiotics were constituting 31.10% of all drugs prescribed with acute tonsillitis diagnosis (as number of prescription items) and 63.83% of prescription costs where as injectable antibiotics were constituting 3.62%. Amoxicillin and enzyme inhibitor (42.98%), cefuroxim (8.65%) and cefdinir (6.85%) were the most commonly prescribed antibiotics where as among injectable antibiotics most commonly prescribed antibiotic drugs were cefazoline (25.14%), benzathyne benzylpenicillin (24.65%) and ceftriaxon (13.32%), in terms of prescription items. When compared in terms of cost, amoxicillin and enzyme inhibitor (29.61%) was ranked in the first place and followed by cefdinir (18.73%) and cefuroxim (14.96%).

CONCLUSION

This study showed that the most commonly prescribed antibiotics for acute tonsillitis diagnosis were broad spectrum antibiotics that is not in align with treatment guidelines. Very high ratio of second and third class cephalosporins suggest that irrational prescribing for this diagnosis is very common in Turkey. Also among the injectable antibiotics, cefazoline being the most frequently prescribed antibiotic instead of benzathyne benzylpenicillin (ranked second) was an indicative of inappropriate use, where as the high rate of ceftriaxone prescribing (13.32% of injectable antibiotics) for acute tonsillitis is quite an alarming finding that indicates big efforts needed to be done in the short term.