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Antimicrobials: Antibiotic usage

Evaluation of antibiotic contents of prescriptions for diagnosis of acute sinusitis prescribed by family physicians in Turkey throughout the year 2011

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OBJECTIVES

Antibiotics are agents which are used commonly for bacterial infections. Besides the benefits of the treatment, the problems of according to their irrational use are increasing day by day. Prescribing antibiotics unnecessarily and giving place to wide spectrum antibiotics in the treatment, using antibiotics inappropriate dosage and period are the examples of irrational antibiotic use which cause to antibiotic resistance, ineffectiveness in the treatment and additional expenditure for health. Evaluation of the content of the prescriptions contribute to realize the condition and make arrangements for correction about this matter. In this study, we aimed to investigate antibiotic prescriptions which are diagnosed only acute sinusitis by Turkish family physicians in primary care health services in 2011.

METHOD

E-prescription data of Turkish Family physicians in the year 2011 were obtained by Family Physician Information System (FPIS) and all prescriptions that have the sole diagnosis of acute sinusitis 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 2011, 56.73% of all visits to primary care family physicians in Turkey were resulted with prescriptions (129,953,746 prescriptions). 1.718.780 prescriptions are constituted with the acute sinusitis diagnosis (as only diagnosis) 90.26% of these prescriptions were containing antibiotics and 2.71% of all this prescriptions were containing injectable antibiotic forms. Antibiotics were constituting 31.89% of all drugs prescribed with acute sinusitis diagnosis (as number of prescription items) and 63.94% of prescription costs. Most commonly prescribed antibiotics were amoxicillin and enzyme inhibitor (28.14%), cefuroxime (15.82%) and clarithromycin (7.65%). When compared in terms of cost, cefuroxime was responsible for 22.11%, followed by amoxicillin and enzyme inhibitor (15.25%) and cefdinir (11.93%). Among all drugs that were prescribed for acute sinusitis, amoxicillin and enzyme inhibitor were second of the list (8.97%) where as sefuroxime was ranked 4th (5.05%) and clarithromycin was 10th (2.44%).

CONCLUSION

Proportion of antibiotic containing prescriptions and the contents of antibiotics prescribed are taken into account in terms of rational drug use. In this study, it has been identified that the ratio of antibiotic prescriptions with acute sinusitis diagnosis were 90.26% of all prescriptions in all around Turkey and most commonly prescribed antibiotics were extended spectrum antibiotics. It is showed that antibiotics prescription frequently reflected in the cost. It has been demonstrated once again that physicians who have a right to say in the first degree in Health must estimate the situation about antibiotic prescribing issue. This study is considered to be guide to other studies planned in this area.