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Antimicrobials: Antibiotic usage

Evaluation of antibiotic prescribing by family physicians in Turkey in 2012, and comparison of provinces in terms of the percentage of antibiotic-containing prescriptions

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OBJECTIVES

In Turkey, one of the biggest problems to deal with is irrational use of antibiotics which is being encountered very frequently. Using antibiotics unnecessarily with insufficient time and dosage causes drug resistance. Furthermore, it can cause inefficient treatment and increasing costs of medical cares. Evaluation of family physicians' prescription content contributes to determinate situation of antibiotic use. It also contributes to improve arrangements which aim at problems about irrational use of medicines. In this study, we aimed to investigate antibiotic prescription contents of Turkish family physicians in primary care health services and compare provinces relating to their percentages of antibiotic prescriptions.

METHODS

E-prescription data of Turkish Family physicians prescriptions in the year 2012 were obtained by Family Physician Information System (FPIS) and evaluated retrospectively by Prescription Information System (PIS). Also FPIS records of family physicians were evaluated by PIS and numbers of prescriptions including antibiotics was found. Dispersion of prescribed antibiotics established in terms of number of items/boxes/costs. Provinces is compared relating to their percentages of antibiotic including prescriptions. For the cost analysis, we used drug resale prices for the year 2010.

RESULTS

In 2012, 265.846.681 protocol was entered into FPIS system. 42.25% (112.327.089) were resulted with prescriptions. 33.99% (38.177.660) of this prescriptions were including antibiotics. The most frequently prescribed antibiotic was amoxicillin and enzyme inhibitor (26.4%) and the following antibiotics are cefuroxime (8.29%), cefdinir (5.5%), clarithromycin (4.12%). The province with highest proportion of prescriptions that contain antibiotics was Gaziantep (55.49%). The following provinces were Diyarbakir (53.02%) and Sanliurfa (51.2%). The less frequent use of antibiotics occurred in Artvin (19.74%), Kastamonu (22.86%) and Rize (23.53%). The costs of all prescribed antibiotics was 877.081.929 TL and it's responsible for 11.38% of all drug costs. Cumulatively highest-cost antibiotic was amoxicillin and enzyme inhibitör (18.39%). The following were cefdinir (16.59%) and cefuroxime (15.96%). The number of items per one antibiotic prescription were 1.11, the number of boxes per one antibiotic prescription were 1.36 and costs of antibiotics per one antibiotic prescription was 22.97 TL.

CONCLUSIONS

In this study, we observed antibiotic prescriptions independent from diagnosis and seasonal differences in 2012 all over the country. The proportion of antibiotic including prescriptions is important to WHO as a criteria for rational use of medicines. In Turkey, 33.99% of all prescriptions were including antibiotics which is very high. It is observed once again with this study that there is a need for auditing prescribing habits of family physicians. In improvement activities directed to rational use of medicines we must examine the reasons for differences between provinces. We also must consider that we need different strategies for solutions.

