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Publication Only

Antimicrobials: Antibiotic usage

Evaluation of the content of injectable antibiotic prescriptions in Turkey in 2012

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Objectives

The evaluation of the content of prescriptions, one of the important indicator of the Physicians' prescribing behavior towards rational drug use (RDU), may guide the efforts to develop strategies to extensificate RDU. Determining the state of different parts of country in terms of RDU would contribute to make assumptions about the country as a whole. In this study, we aimed to investigate the content of injectable antibiotic prescriptions of Turkish family physicians in primary care health services, both for country-wide and for provinces to be able to make comparisons between injectable antibiotic prescription habits of different parts of the country.

Method

In this study, the electronical prescription data prescribed by Turkish Family physicians in 2012 are evaluated retrospectively via Family Physician Information System (FPIS). In addition, process records made by Family physicians are evaluated via FPIS and the number of injectable antibiotic prescriptions are determined. Dispersion of prescribed injectable antibiotics established in terms of ratio of items/box/costs. The provinces are compared by percentage of injectable antibiotics 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 (265.846.681) to primary care family physicians in Turkey were resulted with prescriptions. Among these prescriptions, proportion of those containing injectable forms were 6.74% (7.568.318 prescriptions). The ratio of injectable antibiotic containing prescriptions were 2.01% in country-wide (2.253.429 prescriptions). The proportion of injectable antibiotics among all drugs prescribed, in terms of total number of prescription items is 0.73% (2.289.619 items), in terms of general boxes is 2.27% (10.135.256 boxes) and in terms of cumulative cost is 0.77% (59.185.364 TL). Most commonly prescribed injectable antibiotics were ceftriaxone (24.24%), cefazolin (22.76%) and benzathine benzylpenicillin (16.82%). According to the comparison of the provinces by the prescriptions containing injectable antibiotics Sirnak (6.01%) take the place on the top and followed by Kilis (5.86%) and Diyarbakir (5.48%). Balikesir (0.89%), Giresun (0.88%) and Artvin (0.69%) are at the end of the list. According to the cost of antibiotics, cefuroxime (32.25%), ceftriaxone (27.69%) and cefazolin (26.45%) ranked in top places. Among the prescriptions containing injectable antibiotics, the number of injectable antibiotic items per prescription is found 1.02, number of injectable antibiotic boxes per prescription is found 4.5 and the cost of injectable antibiotic per prescription is found 26.26 TL.

Conclusions

The observation that family physicians in Turkey tend to prescribe wide spectrum antibiotics, and that the two most commonly prescribed injectable antibiotics were cephalosporins indicate irrational antibiotic prescribing in the primary care. In the light of these findings, it may be suggested that the over prescribing of injectable antibiotics may also be associated with other irrational prescribing habits.