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Poster Session I

Antibiotic consumption data

CEPHALOSPORIN USE IN EASTERN EUROPE: FIRST RESULTS OF THE WHO/EUROPE-ESAC PROJECT

A. Versporten¹, G. Bolokhovets², N. Sautenkova², H. Bak Pedersen², H. Goossens¹, And the WHO/Europe-ESAC Project Group¹

¹Laboratory of Medical Microbiology Vaccine and Infectious Diseases Institute, University of Antwerp, Antwerp, Belgium ; ²Health Technologies and Pharmaceuticals Division of Health Systems and Public Health, the WHO Regional Office for Europe, Copenhagen, Denmark

Objectives

There is no reliable data on antimicrobial use in non-European-Union (EU) south-eastern European countries (SEE) and newly independent states (NIS). We aimed to collect valid, representative, comparable total national wholesales data on systemic antimicrobial use in these non-EU countries of the World Health Organization (WHO) European Region. In this abstract we report on cephalosporin use.

Methods

Valid 2011 total (outpatients and hospital care) data on cephalosporin (ATC group J01D) use of 5 SEE (Bosnia and Herzegovina, Montenegro, Serbia, Turkey – plus Kosovo[°]) and 7 NIS (Armenia, Azerbaijan, Belarus, Georgia, Kyrgyzstan, Republic of Moldova, Tajikistan) were analysed according to the WHO Anatomical Therapeutic Chemical (ATC)/Defined Daily Doses (DDD) methodology and expressed in DDD/1000 inhabitants/day (DID). Four generations of cephalosporins were distinguished: first-, second-, third-, and fourth-generation cephalosporins.

Results

Total cephalosporin use varied from 0.8 DID (4% of total antibiotic use) for Azerbaijan to 14.1 DID (33%) for Turkey. Highest first-generation cephalosporin use was reported by Montenegro, Serbia, and Kosovo[°] (2.9, 2.3 and 2.1 DID respectively; on average 8% of total antibiotic use) representing mainly cefalexin; and lowest by Georgia (0.02 DID, 0.1%). Highest use of second-generation cephalosporins was reported by Turkey (9.0 DID, 21%, mainly cefuroxime) followed by Kosovo (1.5 DID, 6%, mainly cefaclor) and lowest by Tajikistan (0.02 DID, 0.1%, cefuroxime). Highest third-generation cephalosporin use was reported by Tajikistan (4.9 DID, 14%, mainly ceftriaxone), Turkey (4.2 DID, 10%, mainly oral substances such as cefixime and cefoperazone), Montenegro (3.2, 8%, mainly cefixime) and lowest by Bosnia and Herzegovina (0.2 DID, 1%, ceftriaxone and cefixime). Parenteral administration of cephalosporins was high in most NIS (5.8, 3.2, 2.2 and 2.0 DID in Tajikistan, Kyrgyzstan, Republic of Moldova and Belarus) representing 11-17% of total antibiotic use (mainly ceftriaxone).

Conclusion

We present for the first time a standardised and validated data set of systemic cephalosporin use in eastern Europe. SEE countries still use considerable volumes of the older narrow-spectrum cephalosporins. On the contrary, in depth studies are needed to understand the remarkably high parenteral use of third-generation cephalosporins in NIS; which cannot be explained by hospital use only. These data will facilitate auditing of antimicrobial use and evaluation of the implementation of guidelines and public health policies to promote its judicious use.

[°]Kosovo (in accordance with UN Security Council resolution 1244(1999))