

Relation between structure and activity of antiseptics and disinfectants that are used in clinics

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Introduction

Intra-hospital infections are clinically manifested from 48 to 72 hours after the infection.

Goals

The aim of this study was to review the usage of antiseptics and disinfectants in selected hospitals in Strumica, Ohrid, Veles, Stip, Kavadarci and Gevgelija and their usage as a suitable way for prevention of interhospital infections, which can cause serious problems in the modern medicine. Our purpose was to find correlation between the structure of the antiseptics and disinfectants and the range of their activity (bacteriostatic or bactericidal).

Materials and methods

The data from the annual reports for antiseptics and disinfectants such as: Bactosal, Ecosal, Dezintal, Betadine, Hydrogen peroxide, Formaldehyde and Ethanol, used on the selected departments for gynecology, surgery and transfusion, were collected.

Results

The results indicate that the amount of disinfectants and antiseptics consumed comparing with the microbiological data indicates their rational utilization starting from 2012. and significant reduction of contamination with conditionally pathogenic bacteria.

Figure 1 . Quantity of antiseptics and disinfectants, consumed on the departments annually and cumulatively in five years expressed in liters

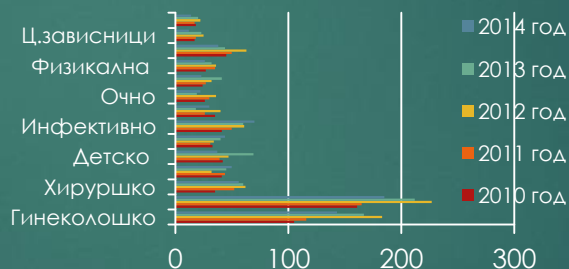
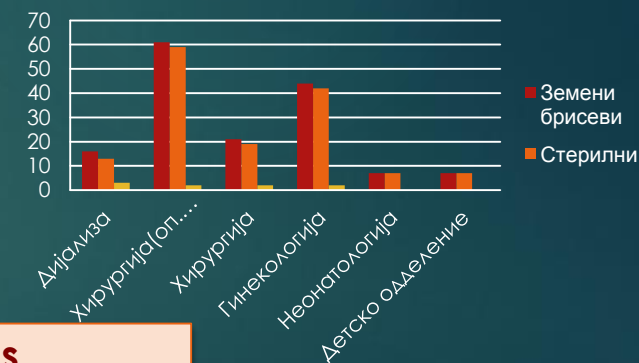


Figure 2 . Annual report for taken swabs and air samples for control of intra-hospital infections in 2012



Conclusions

The word intrahospital or nosocomial means infections that develop in hospitals or are caused by microorganisms acquired in time of the hospitalization of the sick and their clinical manifestations occur 48–72 hours the earliest from the day that the hospitalization occurred. To achieve the purpose of lowering and prevention of these infections, number of precautions and procedures are taken into practice routinely in the hospitals and huge quantities of antiseptics and disinfectants are used. It is important to find correlation between the structure of the antiseptics and disinfectants and the range of their activity (bacteriostatic or bactericidal). Despite of their structure it seems that physical and chemical properties of the solutions used as antiseptics and disinfectants are important for their activity.