

Control of an Outbreak of Vancomycin-Resistant Enterococci in a Tunisian Teaching Hospital

Authors : Hela Ghali, Sihem Ben Fredj, Mohamed Ben Rejeb, Sawssen Layouni, Salwa Khefacha, Lamine Dhidah, Houyem Said Laatiri

Abstract : Background: Antimicrobial resistance is a growing threat to public health and motivates to improve prevention and control programs both at international (WHO) and national levels. Despite their low pathogenicity, vancomycin-resistant enterococci (VRE) are common nosocomial pathogens in several countries. The high potential for transmission of VRE between patients and the threat to send its resistance genes to other bacteria such as staphylococcus aureus already resistant to metacilin, justify strict control measures. Indeed, in Europe, the proportion of Enterococcus faecium responsible for invasive infections, varies from 1% to 35% in 2011 and less than 5% were resistant to vancomycin. In addition, it represents the second cause of urinary tract and wound infections and the third cause of nosocomial bacteremia in the United States. The nosocomial outbreaks of VRE have been mainly described in intensive care services, hematology-oncology and haemodialysis. An epidemic of VRE has affected our hospital and the objective of this work is to describe the measures put in place. Materials/Methods: Following the alert given by the service of plastic surgery concerning a patient carrier of VRE, a team of the prevention and healthcare security service (doctor + technician) made an investigation. A review of files was conducted to draw the synoptic table and the table of cases. Results: By contacting the microbiology laboratory, we have identified four other cases of VRE and who were hospitalized in Medical resuscitation department (2 cases, one of them was transferred to the Physical rehabilitation department), and Nephrology department (2 cases). The visit has allowed to detect several malfunctions in professional practice. A crisis cell has allowed to validate, coordinate and implement control measures following the recommendations of the Technical Center of nosocomial infections. In fact, the process was to technically isolate cases in their sector of hospitalization, to restrict the use of antibiotics, to strength measures of basic hygiene, and to make a screening by rectal swab for both cases and contacts (other patients and health staff). These measures have helped to control the situation and no other case has been reported for a month. 2 new cases have been detected in the intensive care unit after a month. However, these are short-term strategies, and other measures in the medium and long term should be taken into account in order to face similar outbreaks. Conclusion: The efforts to control the outbreak were not efficient since 2 new cases have been reported after a month. Therefore, a continuous monitoring in order to detect new cases earlier is crucial to minimize the dissemination of VRE.

Keywords : hospitals, nosocomial infection, outbreak, vancomycin-resistant enterococci

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