organism and executing complete and coherent infection prevention measures.

Methods: Using the "front warning" system for MDRO in the hospital include inspection paging system, patient care real-time SOS warning and disposal systems, electronic medical order system (including outpatient, emergency, hospitalization and nursing) for rendering prompt isolation, the colors of wrist strap, medical record charts, and bed head label. Meanwhile, the "back-end monitoring" system includes timely summary of MDRO patient checklists, MDRO detection integration from all departments and etc. Through complete and coherent monitoring, hospitals can detect, reduce and prevent the MDRO proliferation within hospitals.

Results: For example with VRE, its new detection and causing healthcare-associated infection trends.

Conclusions: The paper shows that through complete and coherent prevention measures and supplement of technology system, we can detect and control the spread of MDROs within hospital timely and ensure the infection prevention measures execute efficiently.

EXPLORE THE IMPLEMENTATION OF CONTACT PRECAUTIONS WITH ENVIRONMENTAL SAMPLING OF VANCOMYCIN-RESISTANT ENTEROCOCCI (VRE) IN A NEPHROLOGY WARD: A PRE-AND-POST STUDY

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Purpose: Vancomycin-resistant enterococci (VRE) were important pathogen of nosocomial infections and accounted for 9.5% of Enterococci species isolated in a medical center in 2012. The nephrology ward had many VRE colonization/infection cases in the past. We implemented a program with active surveillance and feedback after the ward renovation. To evaluate the effectiveness of the intervention procedures, VRE colonization, infection and environmental contamination were compared before and after the renovation.

Methods: Methods: In nephrology ward, VRE environmental contamination was evaluated by sampling 26 frequently-touched equipment 1 year before and after the renovation.

Results: Before the renovation and reconstruction of nephrology ward, VRE colonization rate was 15.3% (10/65) in August 2012. Mobile equipment had the highest rate of colonization (28%, 8/14), including the handles of nursing cart (100%, 2/2). Faucet and body weight scale were colonized with VRE too. The possible causes of VRE colonization were studied. Colonization in the handles of nursing cart may indicate inappropriate hand washing after leaving the isolation room. The effectiveness of contact isolation may be evaluated with environmental monitoring. Proper feedbacks can be provided in order to strengthen infection control measures: hand hygiene, cleansing and disinfection of the equipment, disinfection of faucets as well as the handles of sitting-type body weight scale. In August 2014, the VRE colonization rate was significantly decreased to 1.53% (1/65, P value = 0.0009).

Conclusions: It is important to strictly practice contact isolation policy and hand hygiene in a patient with VRE colonization. We can evaluate the implementation of these policies with monitoring of the colonization rate in relevant environment and provide point-of-care feedback to ensure quality of environmental cleansing as well as the safety of patients.

SYSTEM REVIEW ON RESISTANCE MECHANISM OF VANCOMYCIN RESISTANT ENTEROCOCCUS IN CHINA

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Purpose: to analyze the resistance mechanism of Vancomycin resistant Enterococcus.

Methods: articles about resistance mechanism of Vancomycin resistant Enterococcus were searched and collected from CNKI, VIP database and wanfang database published until April 2014. The articles were screened according to the inclusion and exclusion criteria.

Results: Ten valid papers were included for our study, including 3 types (VanA, VanB and VanC) which included 65 resistance mechanism of Vancomycin resistant Enterococcus, in 8 provinces. The detecting rates of type VanA, VanB and VanC respective were 52.3%, 4.6% and 23.1%. The detecting rate of type VanA had ascending trend during study period (X² = 35.389, P < 0.001).

Conclusions: type VanA was the most common type of Sugar peptide antibiotics resistance, followed by type VanC which was natural resistance. And VanB had the lowest detecting rate.

ANTIMICROBIAL ACTIVITIES OF SOPHORA FLAVESCENS

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Purpose: An indigenous herb, Sophora flavescens, has been widely used as a traditional medicine in Taiwan. The main goal of this study was to determine the antibacterial activities of various extracts, including 95% ethanol crude extracts, ethyl acetate fraction, and aequous fraction, from Sophora flavescens.

Methods: Antibacterial activity was performed by disk diffusion method, minimum inhibition concentration (MIC), minimum bactericidal concentration (MBC), time-killing curve and synergy effect. The clinical antibiotic isolates including gram-positive and gram-negative pathogens were used for antimicrobial activity assay.

Results: Experimental results showed that the extracts of ethyl acetate exhibited a higher antioxidant activity among all the extracts. In vitro, the ethyl acetate extracts presented a significant antibacterial activity against oxacillin-resistant S. aurens with MIC value of 0.025 mg/mL and MBC of 0.04 mg/mL. A higher content of both total phenolics and flavonoids were found in the ethyl acetate extracts which correlated with a better biological activities compared with other extracts.

Conclusions: These results reveal that the extracts of ethyl acetate from Sophora flavescens could be developed as a potential natural antibacterial agent.

Keywords: Sophora flavescens, Antibiotic-resistant pathogens, Antibacterial activity

ANTIMICROBIAL SUSCEPTIBILITY AND VIRULENT GENES IN STAPHYLOCOCCUS AUREUS ISOLATED FROM PATIENTS WITH PUERPERAL MASTITIS IN SOUTHERN TAIWAN

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Purpose: Staphylococcus aureus (SA) is the main pathogen isolated from patients with puerperal mastitis that frequently occurs among breastfeeding