Commonly isolated pathogens and Antibiotic susceptibility testing in patients with decubitus hospitalized at a tertiary care hospital in Stip

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INTRODUCTION

The increasing rates of hospital infections, plays an important role in the development of chronic, delayed wound healing. Bacterial resistance and multidrug resistance to commonly used antibiotics have created a great problem in the management of different infections. The aim of this study was to identify isolated pathogens from swab samples in patents with decubitus, taken at a tertiary care hospital in Stip and to determine microbial susceptibility to antibiotics.

MATERIAL AND METHODS:

Swab wounds samples were taken in a period of 18 months (from January 2018 till June 2019) from open suspected wounds using Sterile Swab Sticks in patients with decubitus hospitalized at dermatology department at a tertiary care hospital in Stip, The colonies grown were identified based on the colony morphology, Gram stains and biochemical tests. Antimicrobial susceptibility testing was performed by Kirby–Bauer disc diffusion technique following clinical and laboratory standards institute (CLSI) guidelines (Clinical and Laboratory Standards Institute, 2015).

Staphylococcus aureus

Serratia marcescensa

RESULTS:

All suspected swab samples taken from patients with decubitus were processed, and all samples (100%) were culture positive. The most common isolated gram-positive bacteria was *Staphylococcus aureus*, among which 50% contained MRSA and other 50% (*Serratia sp.)* were found to have multidrug resistance to penicillin, macrolides, cephalosporines, clindamycin, folate synthesis inhibitors and quinolones.

Table Distribution of most common pathogens

Department	S. aureus	Serratia marcescens	Serratia fonticola
Dermatology	50%	33%	17%

Note: % is the percentage of pathogen relative to the total number of culture positive samples in that department

Antimicrobial susceptibility testing

CONCLUSION

Our study is the first surveillance study that examined the antimicrobial susceptibilities in patients with decubitus hospitalized at clinical for tertiary care in Stip. The rate of isolated pathogen (methicillin resistant *S. aureus*) was found to be high and requires additional activities and measures to be taken to improve the clinical outcome of patients