TITLE: INCIDENCE OF MULTIRESISTANT MICROORGANISMS IN SKIN LESIONS OF HOSPITALIZED PATIENTS

AUTHORS: ROSSI, E.M.[1]; MENEZES, L.K.[1]; HONORATO, J.F.B[1]; ZAPPANI,N[1].; DREHER, M.[2]; BRATKOWSKI,P.R.G.[2]

INSTITUTION: [1] UNIVERSIDADE DO OESTE DE SANTA CATARINA- UNOESC, CAMPUS DE SÃO MIGUEL DO OESTE-SC (RUA OIAPOC, 211, AGOSTINI, SÃO MIGUEL DO OESTE-SC, BRAZIL). [2] HOSPITAL REGIONAL TEREZINHA GAIO BASSO, HRTGB RUA SÃO CRISTÓVÃO, 335 - SÃO GOTARDO, SÃO MIGUEL DO OESTE-SC.

ABSTRACT:

Skin infections are common in hospital environments, due to the wide spread of pathogenic microorganisms and resistant to antimicrobials. Thus, the objective of this work will be to verify the incidence of resistant microorganisms in different skin lesions of hospitalized patients in a hospital in São Miguel do Oeste - SC. 39 samples were collected from hospitalized patients from July 2018 to February 2020. Samples were collected with swabs and later spread in culture media (MaCconkey Agar, Mannitol Salt, Blood, Soy Tripton, Cetrimide and Saboraud with chloramphenicol) for isolation of microorganisms and incubated in an oven at 36 ± 1ºC. Isolated colonies were identified using biochemical and dye tests according to Koneman et al. (2018) and Maccfadin(2000). The susceptibility test was performed with 78 isolated strains, using the disk diffusion method by Kirby-Bauer, according to the methodology recommended by Brazilian Committee on Antimicrobial Susceptibility Testing. The results of this research revealed 41 Gram positive strains (*Staphylococcus aureus, Staphylococcus* coagulase negative*, Corynebacterium sp. and Bacillus sp*.) and 37 Gram negative strains (*Pseudomonas aeruginosa, Acinetobacter baumannii, Escherichia coli, Enterobacter aerogenes, Enterobacter sp., Klebsiella pneumoniae, Citrobacter koseri, Stenotrophomonas maltophilia, Burkholderia cepacia and Yersinia sp.).* The susceptibility profile demonstrated that Gram positive microorganisms were sensitive mainly to the antibiotics Nitrofurantoin and Tetracycline, and resistance to Penicillin and Oxacillin. 37 (90.2%) of gram positive bacteria are multiresistant, and of these, 31 (75.6%) multidrug resistance loss for at least five classes of different antimicrobials. Gram negative microorganisms showed sensitivity mainly to the antibiotics Imipenem and Amikacin, and resistance to Ampicillin and Nitrofurantoin. The multidrug resistance was observed in 34 (91.9%) of the 37 isolated strains, of which 27 (73%) presented multidrug resistance for at least five different classes of antimicrobials. 37.5% of the strains Gram-negatives were positive for the production β-lactamase enzymes and 29.2% for AmpC. 37.5% of the Gram-negative strains were positive for the production of β-lactamase enzymes and 29.2% for AmpC. The most frequent species for production these enzymes were *P. aeruginosa* (71.4%), followed by *E. coli* and *E. aerogenes* (14.3%). This study showed the problem of microbial multidrug resistance in patients with skin lesions which can be a problem for the control of these infections.

Keywords: Hospital infections; Skin lesions; Multidrug resistance.

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