WOUND HEALING

BACTERIAL ISOLATES FROM INFECTED WOUNDS AND THEIR ANTIBIOTIC SUSCEPTIBILITY PATTERN

T Batinac [1] - M Abram [2] - L Gorup [3] - L Cabijan [4] - E Simonic [4] - L Stojnic-soša [4] - V Saint-georges [4] - I Škrobonja [5] - A Ivekic Jambrošic [6]

University Of Rijeka, Faculty Of Medicine, Department Of Dermatovenereology, Rijeka, Croatia [1] - University Of Rijeka, Faculty Of Medicine, Department Of Microbiology, Rijeka, Croatia [2] - University Hospital Center Rijeka, Department Of Infective Disease, Rijeka, Croatia [3] - University Hospital Center Rijeka, Department Of Dermatovenereology, Rijeka, Croatia [4] - University Hospital Center Rijeka, Department Of Microbiology, Rijeka, Croatia [5] - Veli Lošinj Health Resort, Department Of Dermatovenereology, Veli Lošinj, Croatia [6]

Introduction: Chronic wound represent an important economic and health-care problem, significant cause of morbidity and mortality. Chronic leg wounds are colonized by different bacteria species that could lead to an infection.

Objective: The aim of our clinical investigation was to determine bacterial isolates and antibiotic susceptibilities patterns from infected chronic leg ulcers in patients hospitalized at Department of Dermatovenereology, University Hospital Center Rijeka during the years 2012-2018.

Materials and Methods: In this study, in a cohort of chronic leg wound patients hospitalized due to the clinical local and/or systemic signs of infection and laboratory signs of an inflammation, the microbiological spectrum and sensitivity of isolated strains from swabs and tissue biopsies were evaluated. In patients with continuous or recurrent ulceration and recurrent infection microbiological spectrum and sensitivity of isolated strains was also analyzed. Sensitivity of isolated strains to different antibiotics was performed by the disc diffusion method according to EUCAST standard protocol.

Results: The etiologies of chronic leg wounds were variable with chronic venous insufficiency being the most common etiological factor. The most common bacterium identified was Staphylococcus aureus followed by Pseudomonas aeruginosa, but the presence of gram-negative bacteria species showed a tendency to increase. Multi drug resistant organisms detected were rare. The same bacterial species could persistently be identified over the years in patients with longer wound duration.

Conclusions: The results of our investigation demonstrate the spectrum of the bacterial isolates in patients with infected chronic leg ulcers treated in our Department. The results suggest that the colonization and recurrent infection of chronic leg ulcers with different Gram-positive and Gram-negative organisms could contribute to impaired wound healing. Although S. aureus is still the most frequently detected bacterium, there has been a shift in the bacterial spectrum from gram-positive towards gram-negative bacteria over the last years.