A RETROSPECTIVE ANALYSIS OF THE BACTERIOLOGICAL PROFILE OF INFECTED DIABETIC FOOT IN RELATION TO THE METHOD OF MATERIAL COLLECTION AND SELECTED CLINICAL PARAMETERS

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BACKGROUND AND THE AIM OF THE STUDY

Correct microbiological evaluation of infected wounds is important in the choice of targeted antibiotic therapy, so it is necessary to collect the material for examination properly. The aim of the study was a retrospective analysis of the bacteriological profile of diabetic foot wound infections depending on the method of sample collection and selected clinical parameters.

MATERIAL AND METHODS

Data of 206 patients (141, 68 % men) hospitalized in the local Clinical Department in 2016-2019 for infected diabetic foot ulceration were included in the analysis. According to the current procedures, in the first two years the material for microbiological examination was collected in the form of a swab, in the following years the procedure was changed and a tissue slice was taken from the bottom of the ulceration. Only the results of the first culture taken during hospitalisation were analysed. Differences in the prevalence of Gram(+) and Gram(-) flora were assessed depending on the method of collection (swab, tissue section), the presence of critical lower limb ischaemia, gender, e-GFR level, age, HbA1c, CRP.

CONCLUSIONS

In our study we found significant differences in the prevalence of Gram(+) and Gram(-) bacterial flora in some groups of patients with infected diabetic foot ulcer depending on clinical characteristics and the method of collection.

RESULTS

398 bacterial strains were isolated (average **1.93** strains per patient),
193 (**48.5 %**) were Gram(+) and 205 (**51.5 %**) were Gram(-).
82 samples (**39.8 %**) were monomicrobial, 124 (**60.2 %**) were polymicrobial.

Three most frequent strains depending on the method of collection

rank	swab		slice		total	
1	Staphylococcus aureus	22,0 %	Staphylococcus aureus	15,5 %	Staphylococcus aureus	18,1 %
2	Streptococcus agalactiae	7,5 %	Escherichia coli	12,1 %	Escherichia coli	9,8 %
3	Pseudomonas aeruginosa	6,9 %	Enterococcus foecalis	9,2 %	Enterococcus foecalis	8,3 %

Gram(+)/Gram(-) percentage depending on the method of collection and clinical characteristics

