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The occurrence of resistant pathogens and it´s effect on clinical end-points in patiens with the diabetic foot.

V. Fejfarová[1], A. Jirkovská[1], R. Bém[1], M. Křížová[1], V. Petkov[2], J. Skibová[1]
[1]Diabetes Center, [2]Department of Microbiology, Institute for Clinical and Experimental Medicine, Prague, Czech Republic

Background and aims: Resistant microorganisms, especially methicillin resistant S.aureus (MRSA), present in infected diabetic foot ulcers form a serious clinical problem including lower limb amputations and death. The aims of our study were to assess the occurrence of resistant pathogens and it´s effect on clinical end-points in patients with diabetic foot ulcers. **Methods:** Into the retrospective study we consecutively included 173 patients, whose were treated for infected diabetic foot ulcers in our foot clinic from 1/2005 to 6/2005 and had at least one positive swab cultivation. All patients were divided into three groups – to the group of patients with MRSA (MRSA group), with ESBL (broad-spectrum ß-lactamase) and multi drug resistant pathogens (ESBL and MDR group) and to group of patients with other types of microorganisms (OG). The frequency of clinical end-points (healing, progression of local finding, minor and major lower limb amputations and death) was observed during the following one-year period. Other clinical characteristics such as osteomyelitis, peripheral arterial disease, diabetic foot ulcer degree, etc. were also assessed. **Results:** From 173 included patients, 31 patients (18%) had MRSA; ESBL and MDR pathogens were found in 16 patients (9%). Clinical end-points were significantly influenced by the presence of MRSA – compared to ESBL and MDR group and OG were patients with MRSA characterized by lower percentage of healed foot ulcers (15.6% vs. 31.3% and 36.8%; $p<0.01$), higher percentage of minor (29.6% vs. 20% vs. 9.7%; $p<0.01$) and major amputations (11.1% vs. 6.7% vs. 1.6%; $p<0.01$) and even of death (12.5% vs. 0% and 3.2%; $p<0.01$). From other evaluated parameters study groups did not differ in the prevalence of peripheral arterial disease; however they differed in the degree of diabetic foot ulcers ($p<0.05$) and osteomyelitis development ($p<0.001$). **Conclusion:** We conclude that resistant microorganisms, especially MRSA, have significant clinical impact on end-points in patients with the diabetic foot and may predict higher risk of lower limb amputations and death.

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