

### Clindamycin resistant *Staphylococcus aureus* in diabetic foot ulcers in a multidisciplinary foot clinic

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**Background and aims:** The most common pathogen in a diabetic foot ulcer is a *Staphylococcus aureus*. Antibiotics, a combination of clindamycin with ciprofloxacin, are given in case of infection. In 2008, the first clindamycin resistant *S. aureus* was documented in our multidisciplinary diabetic foot outpatient clinic. The aim of this study was to investigate the risk factors and the prevalence of clindamycin resistant *S. aureus*. **Patients and methods:** The study was retrospectively performed. Included were all patients with diabetic foot ulcers between January 1<sup>st</sup> and December 31<sup>st</sup> 2008. Cases were patients with a clindamycin resistant *S. aureus* (CRSA) controls were patients with a clindamycin sensitive *S. aureus* (CSSA). **Results:** In 97 patients, 132 ulcers were documented. Wound swabs were taken and cultured for 56 patients. The patients with and without a wound swab taken were not different in baseline patient characteristics. In 33 (out of 56) patients, *S. aureus* was isolated. The majority of patients in the CRSA group (n = 16) and CSSA group (n = 17) had diabetes type 2 (81% vs 82%) and were male (69% vs 82%) with a median age of 61.5 (IQR: 52.5-66.0) vs 60 (IQR: 49.5-73.5) years. The median duration of diabetes was 22 (IQR: 10.5-28.0) vs 18 (IQR: 12.3-30.5) years with a median HbA<sub>1c</sub> of 8.3% (IQR: 6.9-9.8) vs 8.2% (IQR: 6.7-9.4). No differences were seen in cardiovascular risk factors, microvascular or macrovascular complications between CSSA and CRSA. CRSA patients tended to have a higher BMI (median: 31.0 vs 26.6, p=0.052), were more often formerly hospitalized (50% vs 12%, p=0.02) and used antibiotics more frequently (50% vs 18%, p=0.049) in the previous 6 months compared to CSSA patients. In the CRSA group, significantly more ulcers had a depth below the dermis (PEDIS-classification grade 2 or 3; 100% vs 50%, p=0.01) and more ulcers were clinically infected (PEDIS-classification grade 3 or 4; 88% vs 53%, p=0.03). **Conclusion:** In our center the prevalence of *S. aureus* isolated in a diabetic foot ulcer was 59%, of which half were clindamycin resistant *S. aureus*. Risk factors for CRSA were hospitalization and use of antibiotics in the previous 6 months and a deep and infected ulcer. Thus, there was a high prevalence of clindamycin resistant *S. aureus* in our hospital, and in foot ulcer patients with one or more of the identified risk factors wound cultures should be routinely taken as our first choice of antibiotic treatment may not be applicable.