

# Diabetic ulcers--a clinical and bacteriological study

## Abstract:

One hundred consecutive patients with diabetic ulcers were studied in an 8-month-period. There were 58 females. The mean age was 59.9 years. Eighty three patients had non-insulin dependent diabetes mellitus. The mean duration of diabetes mellitus was 11.6 years. The mean duration of the ulcer was 8.5 months. Sixty nine of the ulcers were gangrenous. Over 50% of the ulcers involved the big toes. Neuropathic ulcers were found mainly in the sole of the feet. Roentgenograms showed evidence of osteomyelitis in 44 patients. There were 356 bacterial isolates (340 aerobes and 16 anaerobes) from the ulcers. There were 3.6 infecting organisms per ulcer in gangrenous ulcers, while in neuropathic ulcers, there were 3.4 infecting organisms per ulcer. In both types of ulcer *Staphylococcus aureus* and *Escherichia coli* were the commonest infecting organisms each being isolated in 88 of the 100 ulcers studied. In repeat bacterial cultures at 4 weeks there were 116 bacterial isolates. *Staphylococcus aureus* persisted in 63 ulcers despite therapy, while *Escherichia coli* persisted in 35. There were no new organisms isolated at repeat cultures and no ulcer was completely sterile. The *Staphylococcus aureus* was 100% sensitive to Augmentin (Amoxicillin plus clavulanic acid), Clindamycin, Novobiocin, and Amikacin while the gram negative bacilli were sensitive to Cefotaxime, Piperacillin, Amikacin and augmentin, Clindamycin, Chloramphenicol and Lincomycin inhibited the growth of anaerobes to a varying degree