INFECTION IN THE NEUROPATHIC FOOT

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The infected diabetic foot covers a spectrum of presentations ranging from local infection of the ulcer to spreading sepsis, sloughing of soft tissue and finally, vascular compromise of the skin, seen as a blue discolouration. The microbiology of the diabetic foot is unique. Infection can be caused by Gram-positive, Gram-negative and anaerobic bacteria, singly or in combination.

Antibiotics alone do not treat foot infections. However, at initial presentation, it is important to prescribe a wide spectrum of antibiotics because it is impossible to predict the organisms from the clinical appearance. It is therefore vital to send swabs for culture without delay. Deep swabs or tissue should be taken from the ulcer after initial debridement and if the patient undergoes operative debridement then deep tissue should also be sent. When a positive culture is found, it is necessary to focus antibiotic therapy according to sensitivities. Ulcer swabs should be taken at every follow-up visit.

As there is a poor immune response of the diabetic patient to sepsis, even bacteria regarded as skin commensals may cause severe tissue damage. This includes Gram-negative organisms such as Citrobacter, Serratia, Pseudomonas and Acinetobacter. When Gram-negative bacteria are isolated from an ulcer swab they should not be regarded as automatically insignificant. Blood cultures should also be sent if there is fever and systemic toxicity.

Good communication with the microbiologist is advised and it is helpful to do laboratory bench rounds to discuss management.