P9

The value of deep operative specimens and blood cultures in the assessment of infected diabetic feet.

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There is controversy over the microbiological investigation of infected foot ulcers in diabetic patients. This study has demonstrated the value of deep operative specimens and blood cultures in the assessment of these patients. We compared the bacteria isolated from deep operative specimens with those from tissue specimens taken at podiatric debridement in 12 diabetic patients with infected neuropathic foot ulceration, of whom 11 had Charcot foot disease. The following organisms were isolated from tissue specimens after podiatric debridement: MRSA (25%), Staphylococcus aureus (25%), Pseudomonas aeruginosa (25%), Streptococcus milleri (8%), Enterococcus (17%), Proteus (17%), Klebsiella (8%) and mixed anaerobes (8%). From the 12 patients, 18 deep tissues were taken at operative debridement. There was a 78% concordance between the isolates from podiatric and operative tissue samples. 11 samples grew similar and clinically significant organisms in both types of specimen (MRSA, S.aureus, P.aeruginosa, S.milleri, Enterococcus, Proteus, Klebsiella and mixed anaerobes). In a further 3 samples, there was either no growth or clinically non-significant organisms were isolated from both operative and podiatric specimens. However in 4 cases, the organisms differed between podiatric and operative samples. In 3 of these cases, no organisms were isolated from podiatric specimens but S.aureus, P.aeruginosa, E.faecalis, and Group B streptococcus were isolated from deep operative specimens. In the 1 remaining case, MRSA and P.aeruginosa were isolated from podiatric specimens but P.aeruginosa only was isolated from the operative specimen. Thus in 22% of patients, the collection of samples from both deep operative and superficial podiatric tissue provided key information to facilitate antimicrobial treatment which was targeted against the specific organisms isolated. Blood cultures were also carried out in 8/12 of the patients and 4 had a bacteraemia. The isolates were clinically significant in 3 patients (S.aureus, Enterococcus, P.aeruginosa, and Group B streptococcus) and clinically insignificant in 1 (A.dentrificans). **Conclusion:** Collecting deep operative tissue specimens from all patients undergoing surgery for infected diabetic foot disease and performing blood cultures allows for targeted antimicrobial therapy.