

# Concordance in diabetic foot ulceration: a cross-sectional study of agreement between wound swabbing and tissue sampling in infected ulcers

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## Plain English summary

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## Plain English summary

We investigated whether or not laboratory results from infected diabetic foot ulcers depended on the type of sample taken (a wound swab or a tissue sample of a piece of infected ulcer). Doctors reviewed the results to see if this might have led to use of a different antibiotic. We then compared two ways of detecting bacteria in 12 patients, namely growing them or using genetic techniques. We also followed up patients after 1 year to see whether or not their ulcers had healed.

We enrolled 400 patients; 299 had a 12-month follow-up. On average, patients were 63 years old, had had diabetes for 15 years and had had an ulcer for 8 weeks.

The podiatrist, nurse or doctor collected a sample from the infected ulcer using a swab and then collected a tissue sample from the same area.

Swab results from 70% of patients reported at least one pathogen (i.e. bacteria likely to cause infection), but significantly more tissue results reported pathogens (in 86% of patients). Doctors reported that they would change antibiotics more often when using the tissue results than when using the swab results. Given that we tested doctors' clinical decisions in virtual conditions, we do not know if in actual clinical practice the results of tissue sampling rather than swab sampling would change treatment or affect ulcer infection or healing. Both tissue sampling and swabbing were safe overall, with few reports of pain or bleeding.

The 1-year healing rate was 44.5%. Patients whose ulcers healed had less severe ulcers, better circulation and a newer, single ulcer.



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