

Diabetic Foot Infection Laboratory Diagnosis

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Definitions

Wound contamination: the presence of non-replicating organisms in the wound

All chronic wounds are contaminated

Wound colonization: the presence of replicating microorganisms adherent to the wound in the absence of injury to the host

Wound Infection: the presence of replicating microorganisms within a wound that cause host injury

How do you know when a wound is infected?

One feature is common to all infected chronic wounds

The failure of the wound to heal and progressive deterioration of the wound

Diagnosis of Infection in DFU

Purulent secretions (pus)

Two or more local signs or symptoms of inflammation (e.g., redness, warmth, induration, pain or tenderness) suggests the wound is infected.

Systemic signs of infection (e.g., fever, chills, leukocytosis, elevated inflammatory markers) in severe infections





Laboratory Investigation

The CBC count and erythrocyte sedimentation rate (ESR) are slightly or moderately elevated

Elevations are not diagnostic and, therefore, are unhelpful

Aim of Doing Wound Culture

To identify organisms and to assist in treatment of an infection rather than be used to diagnose infection.

When to Do a Culture

Routine swabbing is not justified

Diagnosis of infection is essentially clinically, regardless of the results of any wound culture

Specimen Collection and Culture Techniques.

The gold standard

Tissue biopsy

Needle aspirate

If a tissue biopsy is not possible

Swab culture after debridement

Equipment Required

الأدوات المستخدمة





1. Palm to palm



2a. Right palm over left dorsum



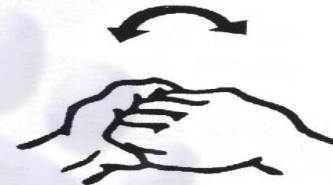
2b. Left palm over right dorsum



3. Fingers interlace palm to palm



4. Back of fingers to opposing palms



5a. Rotational rubbing of right thumb



5b. Rotational rubbing of left thumb



6a. Rotational rubbing of left palm



6b. Rotational rubbing of right palm

Specimen Collection and Culture Techniques

خطوات أخذ المزرعة

Apply gloves

إرتداء الجوانتى

To protect the health care workers hands

Specimen Collection and Culture Techniques

خطوات أخذ المزرعة

Debride wound

تحضير الجرح

Cleanse the wound with sterile saline
بمحلول الملح

غسيل الجرح

To achieve a clean culture site and to avoid obtaining a culture from the pus on the surface of the wound







Don't Use antiseptics

لا تعقيم للجرح قبل أخذ العينة

Specimen Collection and Culture Techniques

خطوات أخذ المزرعة

Swab the base of the lesion تؤخذ المزرعة من عمق
منتصف الجرح

Use a “zig-zag” motion whilst simultaneously rotating between the fingers

Ensure all the swab will contain sufficient amounts of bacteria





Step by Step Improving DF care in Egypt 11-13/11/2009



Specimen Collection and Culture Techniques

خطوات أخذ المزرعة

Place the specimen straight into the transport
medium

ضع المزرعة في الأنبوبة المخصصة

To remove the possibility of contamination



Specimen Collection and Culture Techniques

خطوات أخذ المزرعة



Specimen Collection and Culture Techniques

خطوات أخذ المزرعة

- Transport to the laboratory promptly in suitable transport media ترسل الى المعمل بسرعة

