



The Mycetoma Research Center,  
University of Khartoum  
WHO Collaborating Center  
on Mycetoma & Skin NTDs

# Standard Operating Procedures for Mycetoma Lesion and Wound Management

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# **Standard Operating Procedures for Mycetoma Lesion and Wound Management**

## **Background**

Mycetoma lesions are susceptible to secondary bacterial infection and sepsis and can lead to embolisation of blood and lymphatic vessels, compromising tissue viability. The mycetoma wound ischaemia can lead to necrosis with subsequent infection, particularly anaerobic. The foul-smelling/malodor-infected lesions often lead to social exclusion, stigma, misery and depression. Additionally, they can contribute to poor treatment outcomes, even resulting in amputation.

These standard operating procedures aim to provide a consistent approach to mycetoma lesions management and associated wounds and use a multi-professional, holistic, evidence-based, patient-centred approach to wound care.

The ideal treatment outcome is complete wound healing through either local or systemic treatment, which may involve surgery, with minimum pain, infection, blood, odour, and psychological trauma.

Treatment should be realistic and acceptable to the patient and carers. The primary aim is the promotion of comfort and the enhancement of quality of life, which may hitherto have been severely impaired.

## **Objective**

To provide standardised guidelines for the management of mycetoma lesions and wounds to ensure effective and consistent patient care, good treatment outcomes and the evaluation of care provided.

## **Scope**

These standardised operating procedures are to apply to all health care professionals (HCP) involved in the assessment, diagnosis, treatment, management and evaluation of mycetoma lesions and associated wound care in the clinical settings (hospital, clinic, community).

## **Responsibilities of Health Care Professionals**

- All healthcare providers, professionals, and volunteers play a crucial role in maintaining best practices for mycetoma lesions and wound care, utilising a measurement evaluation tool for clinical assessment and outcomes.
- Doctors and nurses with specialised training in mycetoma lesion wound care management should be capable of diagnosing, prescribing treatment, and monitoring patient progress as part of a multidisciplinary team.
- Healthcare professionals must be trained in assessing, diagnosing, and managing mycetoma care before attending to patients with mycetoma lesions or wounds.
- A training period is essential for all staff members, culminating in certification.
- The infection control team is vital in ensuring best practices are upheld among all healthcare professionals.

## **In the mycetoma lesion and wound, consider the following:**

- Pain
- Exudate
- Necrotic tissue
- Bleeding
- Odour
- Infection
- Comfort
- Cosmesis
- Patient Lifestyle
- Psychological Effect
- Patient Access to Medical Resources
- Financial
- Social Circumstances
- Spiritual Pain

## Clinical Resources Required

1. Sterile wound dressing pack
2. Appropriate wound dressing
3. Comfortable strapping to secure wound dressing
4. Sterile gloves – correct multi sizes
5. Antiseptic solutions, e.g. Povidone-iodine, chlorhexidine
6. Normal saline solution
7. Scalpel and surgical instrument if debridement is required
8. Oral/topical antibiotics
9. Analgesia
10. Sutures, if required - correct sizes of suture material
11. Protective gowns - adhere to Universal Precautions - masks, eyewear, gloves, etc
12. Documentation: all procedures are to be dated, timed and documented.
13. Confidentiality principles adhered to information to be safely stored.
14. Wound cleaning and dressing are to be carried out with the oral or signed patient informed consent.
15. Wound cleaning and dressing are to be carried out in a safe place.

## **Assessment and documentation of the Patient Condition.**

1. Presenting wound complaints, including duration and progression of lesion, as well as previous treatments.
2. Past medical history
3. Investigations
4. Blood results
5. Pharmacy/medication history
6. Physical examination to assess the size, depth, and extent of the lesion, discharge, signs of infection, and involvement of underlying structures.
7. Diagnosis
8. Management Plan - for example
  - a. Microbiological culture
  - b. Imaging
  - c. Ultrasound
  - d. Biopsy
  - e. Regular lesion photography – for follow-up comparison

Following the lesion or wound assessment, choose a dressing regimen to meet the patient needs of the patient. Be prepared to change if it does not work well for the patient, the aim is to contain problems and improve quality of life. There are numerous commercially available products. The HCP and MRC staff must keep abreast of the merits of established and new products. The simplest product may be the best and most cost-effective. The criteria are comfort, acceptability and availability.

## **Wound monitoring**

### **Pain**

Check for the cause of the pain: is it caused by infection or the actual dressing.

- Try to use simple regimens.
- Limit the frequency of dressing changes.
- Non-stick and sealed dressings may be useful.
- Prior to applying the dressing, use analgesia or relaxation techniques after discussing the options with the patient.

### **Exudate**

- Use dressings, such as hydrocolloid fibres such as 'Aquacel', with high absorbency to protect clothing.
- Change the top layer as often as necessary, avoiding frequent changes of dressings placed directly over the wound.
- Alternatively, use non-stick dressing.
- Protect the surrounding good skin with barrier cream or a non-sting barrier film spray.

### **Necrotic Tissue**

- Surgical debridement may be necessary to remove dead tissue to promote healing.
- Desloughing agents may be used.

## Bleeding

- Gauze soaked in adrenaline 1:1000 or sucralfate liquid or alternately Kaltostat may be used over bleeding points.
- Gentle removal of dressing with forceps using normal saline spray on the dressing or irrigate using a syringe containing warm sodium chloride 0.9% prevent trauma at dressing changes.
- Kaltostat becomes a jelly-like substance and can be easily lifted off using forceps or gloved fingers.
- Sorbsan dressing becomes liquefied and can be washed off with sodium chloride 0.9%
- It is preferable to use dressings that can be left in place for a few days to prevent frequent dressing changes.
- These include the alginates Kaltostat, Kaltostat Fortex, Sorbsan and Sorbsan Plus. These dressings may have different names.

However, the above dressings may not be available – use of the simplest products. If used correctly, they may be as effective with good clinical infection control practices in place.

## Odour

- Use systemic or topical metronidazole (or both).
- Charcoal dressing are useful, and the wound should be sealed.
- Odour/smell may be disguised using deodorisers, which are used sparingly on top of the dressing.

## Infection

- Wounds can become colonised with bacteria commonly. Colonisation refers to a wound containing multiplying bacteria that do not cause a host reaction or delay healing. A colonised wound, therefore, may not show signs of visible infection.
- Serious colonisation may lead to delayed healing. At this point, there may still not be any visible signs of clinical infection.



## Clinically Infected Wounds

For true infection to be diagnosed, i.e. the invasion of bacteria and their multiplication in the tissues, certain clinical symptoms and signs must be observed that include.

- Delayed healing/dehiscence
- Pain
- Swelling
- Hotness
- Pus
- Increased exudates/purulent discharge
- Malodor (acid smell may indicate anaerobic infection)
- Systemic signs – pyrexia/rigour or tachycardia and increased neutrophil count

## Treatment

- Swabs must be taken when a wound is showing two or more of these clinical signs of infection.
- The most common organisms include coliforms, anaerobes, staphylococcus aureus, and group G beta-haemolytic streptococcus. Staphylococcus aureus is probably the most common pathogen.
- Antibiotics such as flucloxacillin, trimethoprim or erythromycin should cover most common infections. Still, metronidazole may be needed for anaerobic infections, and topical metronidazole gel may be required and useful for eradicating the associated noxious smell.

## **Comfort**

By trial and error, a combination of dressings and top packing that will be most comfortable will need to be established for the individual patient if possible.

## **Cosmesis**

The best cosmetic effect possible should be achieved in order to boost confidence.

## **Lifestyle**

Patients may need different approaches for different occasions, thus:

- Avoid bulky, unsightly dressings if possible
- Large sheet hydrocolloids may be more appropriate
- Avoid using communal showers or baths – patient education
- Daily relaxing baths, if possible or appropriate
- Perfumes and cosmetics encourage and promote well-being and confidence
- Use minimal skin strapping by fixing the dressing with vests and cling film if appropriate.
- Convenient and comfortable pads can be used.

## **Psychological Effects**

- Attention to detail, particularly ensuring leak-proof and odour-proof appliances
- Giving information and explanations will lessen the sense of isolation and enhance confidence and morale.

## **Patient education and follow-up**

- HCP must educate the patient and co-carer on wound care at home, signs of infection and the importance of adherence to treatment.
- Schedule regular follow-up visits to monitor wound healing and adjust treatment as necessary.

## **Documentation in the patients medical record**

- The wound clinical findings
- Treatments
- Patients' responses

## **Waste disposal and environmental cleaning**

- Dispose of all used materials and dressings in designated biohazard containers.
- Ensure the treatment area is cleaned and disinfected after each procedure
- In the community, ensure all waste is brought back to base and disposed of effectively and safely

## **Monitoring and evaluation**

- Regularly review patient outcomes
- Adhere to the standard operating procedures
- Update the procedures based on new evidence and clinical guidelines
- Conduct audits to ensure compliance.
- Identify areas for improvement.

**Remember, the principles.**

**Address the problems.**

**Consult a nurse with specialist experience in wound management.**

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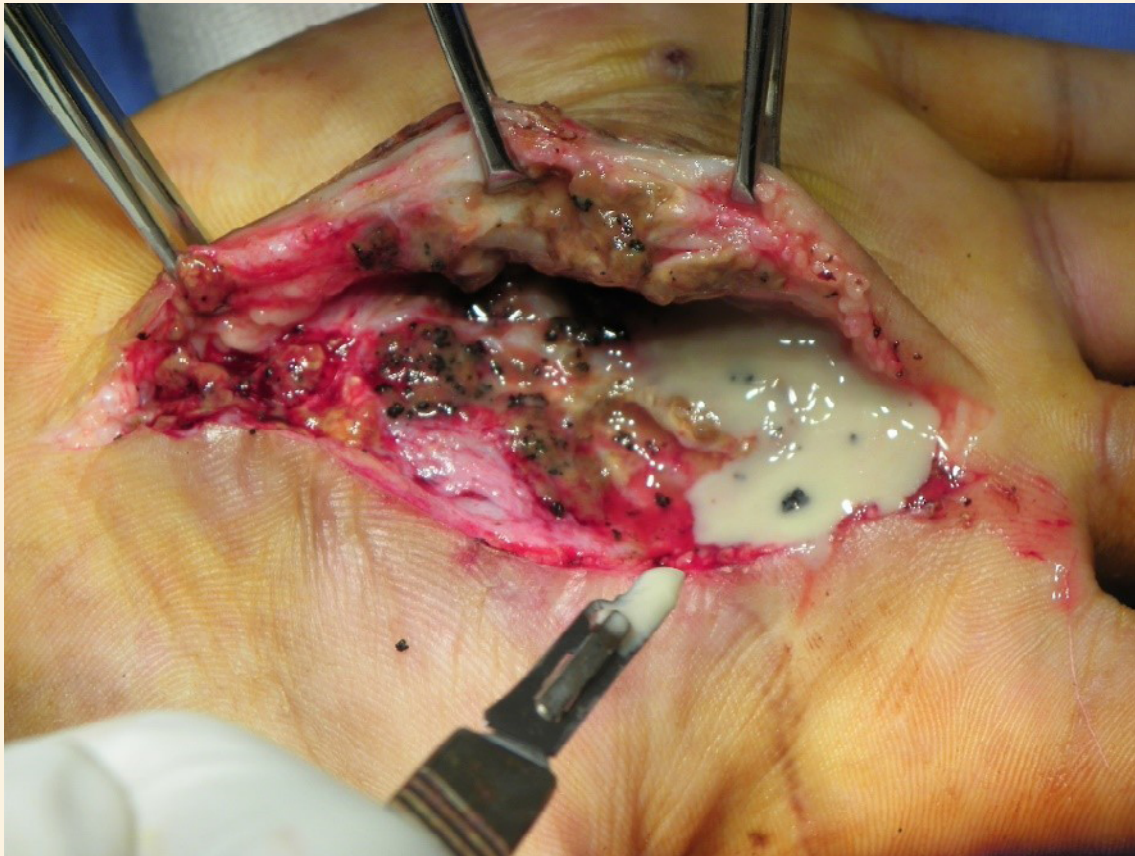
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**Fig. 1: Infected foot mycetoma lesion**



**Fig. 2: Infected foot eumycetoma lesion**




**Fig. 3: Infected mycetoma lesion**



## Approval

These Standard Operating Procedures have been prepared, reviewed and approved by

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