



Mycetoma Research Centre

University of Khartoum

WHO Collaborating Center on

Mycetoma & Skin NTDs

The Mycetoma Nursing Guidelines





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Dealing with mycetoma patients necessitates a collaborative and multidisciplinary approach due to the complex nature of the disease and its potential impact on various aspects of patients' health and well-being. Mycetoma management requires expertise from healthcare providers across different specialties, including dermatology, infectious diseases, orthopedics, wound care, microbiology, pharmacy, and nursing. Each discipline brings unique perspectives and skills to the table, contributing to a comprehensive and holistic approach to patient care.

Nursing plays a pivotal role in this multidisciplinary team, serving as advocates, educators, caregivers, and coordinators of care for mycetoma patients. Nursing guidelines are essential tools that equip healthcare providers with the necessary knowledge and strategies to deliver high-quality care to patients with mycetoma. These guidelines are designed to address the diverse needs of patients while promoting their physical, emotional, and psychosocial well-being.

The nursing guidelines outline specific interventions and protocols aimed at minimising complications, optimising treatment outcomes, and improving the overall quality of life for mycetoma patients. By adhering to these guidelines, healthcare providers can ensure that patients receive consistent and evidence-based care throughout their treatment journey.

In addition to addressing the physical aspects of mycetoma management, the nursing guidelines also emphasise the importance of addressing patients' psychosocial needs. Living with mycetoma can have profound psychological effects on patients, including feelings of isolation, depression, anxiety, and low self-esteem. Nurses are trained to provide compassionate and holistic care, offering emotional support, counselling, and resources to help patients cope with the challenges they face.

Furthermore, the nursing guidelines emphasise the importance of preventive measures to reduce the risk of complications and recurrence. Nurses educate patients about proper wound care, hygiene practices, and lifestyle modifications to minimise the

likelihood of disease progression or transmission. By empowering patients with knowledge and skills, nurses enable them to take an active role in managing their health and preventing future complications.

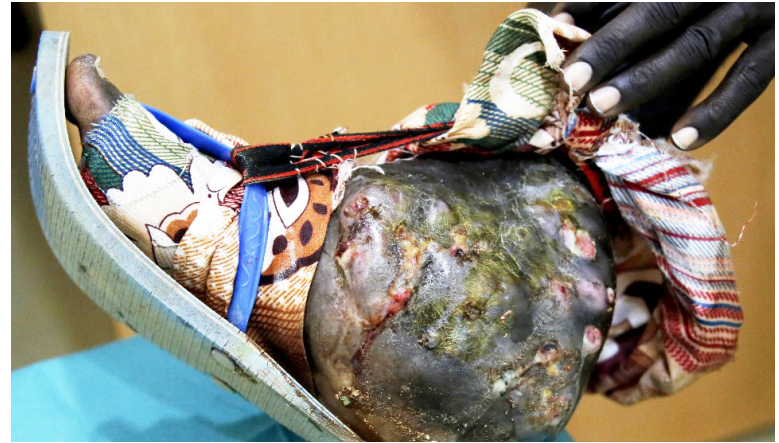
The nursing guidelines for mycetoma patients are essential tools that facilitate comprehensive and coordinated care across healthcare disciplines. By following these guidelines, healthcare providers can promote patients' physical and psychosocial well-being, minimise complications, and improve treatment outcomes for individuals living with mycetoma.

Lesion and Wound Care

Mycetoma lesions require careful and consistent wound care to minimise the risk of complications, promote healing, and alleviate discomfort for the patient. By following these comprehensive wound care guidelines, healthcare providers can effectively manage mycetoma lesions, minimise complications, and support the healing process for patients living with this challenging condition. The following steps should be followed:

Assessment and Preparation

- Before initiating wound care, assess the mycetoma lesion thoroughly, noting its size, location, depth, and any associated symptoms such as pain or odour.
- Wash hands thoroughly with soap and water and put on appropriate personal protective equipment (PPE), such as gloves and a gown, to prevent cross-contamination.
- Ensure a clean and well-lit environment for optimal visualisation of the wound.



Cleaning

- Gently cleanse the mycetoma lesion and surrounding skin with a mild antiseptic solution or sterile saline solution. Avoid using harsh or irritating cleansers that may further damage the skin.
- Use a sterile gauze or soft cloth to dab the solution onto the wound, taking care not to apply excessive pressure that could cause trauma to the tissue.

Debridement

- If the mycetoma lesion contains necrotic tissue or debris, consider performing selective debridement under the guidance of a healthcare provider. Debridement helps remove dead or infected tissue, facilitating wound healing and reducing the risk of infection.
- Exercise caution during debridement to avoid causing additional trauma or pain to the patient.

Dressing Application

- Select an appropriate sterile dressing based on the characteristics of the mycetoma lesion, such as size, depth, and exudate level. Options may include non-adherent dressings, hydrocolloid dressings, or foam dressings.
- Apply the dressing gently over the cleaned mycetoma lesion, ensuring adequate coverage and adherence to surrounding healthy skin.
- Secure the dressing in place with medical tape or adhesive strips, taking care not to apply excessive tension that could impair circulation or cause skin irritation.

Exudate Management

- Mycetoma lesions may produce varying amounts of exudate, ranging from serous fluid to purulent discharge. Choose a dressing that effectively absorbs excess exudate while maintaining a moist wound environment conducive to healing.
- Monitor the dressing regularly for saturation and replace it as needed to prevent maceration of the surrounding skin and minimise the risk of infection.

Monitoring and Documentation

- Regularly assess the mycetoma lesion and dressing for any changes in appearance, such as increased redness, swelling, warmth, or drainage.
- Document wound characteristics, dressing changes, and any observed abnormalities in the patient's medical record, facilitating communication and continuity of care among healthcare providers.



Patient Education

- Educate the patient and their caregivers about the importance of proper wound care and dressing maintenance to promote healing and prevent complications.
- Provide instructions on signs and symptoms of infection to watch for, emphasizing the importance of promptly reporting any concerns to the healthcare team.

Follow-up

- Schedule regular follow-up appointments to assess the progress of the mycetoma lesion, evaluate treatment efficacy, and make any necessary adjustments to the wound care plan.
- Collaborate with other members of the healthcare team, such as wound care specialists or infectious disease experts, as needed to optimise patient outcomes.

Education and Counseling

- Provide comprehensive education to the patient and their caregivers about mycetoma, including its causes, symptoms, treatment options, and preventive measures.
- Offer counselling and emotional support to help patients cope with the psychological impact of the disease, especially if it involves disfigurement or disability.



Infection Control

Ensuring effective infection control measures is crucial in managing mycetoma to halt the disease's transmission within healthcare environments and safeguard the well-being of patients and healthcare personnel alike. By steadfastly adhering to these protocols, healthcare providers can significantly reduce the likelihood of mycetoma spreading in healthcare settings, shielding both patients and staff members and upholding a secure and supportive atmosphere for patient care. Consistent surveillance, continuous education, and commitment to optimal practices remain pivotal elements in implementing successful infection control strategies for mycetoma management.

Adherence to Infection Control Protocols

- Healthcare facilities should have established infection control protocols specifically tailored to address the unique challenges posed by mycetoma.
- These protocols should include guidelines for the proper handling, containment, and disposal of infected materials and specimens to prevent cross-contamination and transmission.
- Staff members should receive regular training on infection control practices and be educated about the signs and symptoms of mycetoma to facilitate early detection and intervention.



Use of Personal Protective Equipment (PPE):

- Healthcare providers involved in the care of mycetoma patients should wear appropriate PPE to minimize the risk of exposure to infectious agents.
- PPE may include gloves, gowns, masks, and protective eyewear, depending on the specific tasks being performed and the level of anticipated exposure.
- Gloves should be worn when handling mycetoma lesions, wound care supplies, or contaminated materials and changed between patient encounters to prevent cross-contamination.

Proper Sterilisation of Equipment and Surfaces

- All medical equipment and instruments used in the care of mycetoma patients should be properly sterilised or disinfected according to established protocols.
- This includes reusable instruments such as forceps, scissors, and probes, as well as surfaces in patient care areas such as examination tables, countertops, and treatment rooms.
- Sterilisation methods may include autoclaving, chemical disinfection, or heat-based processes, depending on the nature of the equipment and manufacturer recommendations.
- Healthcare facilities should have dedicated protocols for cleaning and decontaminating equipment used in the care of mycetoma patients to minimize the risk of secondary infections and cross-contamination.

Environmental Controls

- Implement environmental controls to minimise the risk of fungal spore dissemination within healthcare settings.
- This may include maintaining proper ventilation systems, controlling humidity levels, and regularly cleaning and disinfecting air ducts and filters.
- Healthcare facilities should also have protocols in place for the safe handling and disposal of contaminated materials, such as dressings, bandages, and linens, to prevent the spread of fungal spores.

Patient Isolation

- In some cases, it may be necessary to isolate mycetoma patients to prevent the spread of secondary bacterial infection to other individuals, particularly those who may be immunocompromised or at higher risk of complications.
- Isolation precautions should be implemented based on the specific characteristics of the infectious agent and recommendations from infection control experts.

Pain Management Strategies

- By implementing these strategies, healthcare providers can optimise pain management efforts and improve outcomes for patients experiencing pain.

Education and Communication

- Ensure that the patient understands the importance of pain management and feels comfortable communicating their pain levels. Educate them about the different pain assessment tools used and encourage them to provide honest feedback about their pain experience.

Individualised Treatment Plans

- Recognise that pain management is not one-size-fits-all. Work with the healthcare team to develop individualised treatment plans tailored to the patient's specific needs, preferences, and medical history.

Multimodal Approach

- Employ a multimodal approach to pain management, which combines various interventions to target different aspects of pain. This could include a combination of pharmacological and non-pharmacological techniques to provide optimal pain relief while minimizing side effects.

Regular Monitoring and Adjustment

- Continuously monitor the effectiveness of pain management interventions and adjust the treatment plan as needed based on the patient's response. Regularly reassess pain levels using appropriate assessment tools and modify interventions accordingly.

Collaboration with Interdisciplinary Team

- Collaborate with other healthcare professionals, such as physical therapists, psychologists, and pain management specialists, to provide comprehensive care for the patient. Incorporate their expertise and recommendations into the pain management plan as appropriate.

Addressing Underlying Causes

- Identify and address any underlying causes of pain to effectively manage symptoms. This may involve treating the underlying medical condition, adjusting medications, or addressing psychosocial factors contributing to the pain experience.

Empowering Self-Management

- Empower the patients to take an active role in managing their pain by providing them with tools and resources to cope with pain outside of healthcare settings. This could include teaching them relaxation techniques, providing self-care instructions, and encouraging them to engage in activities that distract from pain.

Pain Documentation and Reporting

- Maintain thorough documentation of the patient's pain assessment findings, treatment interventions, and response to therapy. This documentation not only ensures continuity of care but also provides valuable information for evaluating the effectiveness of pain management strategies over time.

Mobility and Rehabilitation

Mobility and rehabilitation play a crucial role in enhancing the quality of life for mycetoma patients, particularly those facing functional limitations. To address their needs effectively, collaboration with physical therapists and occupational therapists is essential. By leveraging their expertise, healthcare professionals can develop tailored mobility and rehabilitation plans that cater to the unique circumstances of each patient.

The collaboration begins with a comprehensive assessment of the patient's condition, considering factors such as the severity of the mycetoma infection, the extent of functional limitations, and any underlying medical conditions. This assessment forms the basis for creating individualized treatment plans that focus on restoring mobility and functional independence.

Incorporating a multidisciplinary approach, healthcare professionals work closely with physical therapists and occupational therapists to design rehabilitation programs that address specific impairments and goals. These programs typically include a combination of therapeutic exercises, manual techniques, assistive devices, and adaptive strategies to improve strength, flexibility, balance, and coordination.



During the rehabilitation process, patients are supported in performing activities of daily living (ADLs) and encouraged to actively participate in prescribed exercises. Therapists provide guidance and support, ensuring that patients understand the rationale behind each exercise and its benefits. Moreover, they offer strategies to overcome any barriers or challenges that may arise, fostering a sense of empowerment and self-efficacy.

Regular monitoring and reassessment are integral components of the rehabilitation process. Progress is tracked, and adjustments are made to the treatment plan as needed to optimize outcomes. Additionally, ongoing education and support are provided to both patients and their caregivers to promote adherence to the rehabilitation program and facilitate long-term success.

By focusing on improving mobility and functional abilities, the collaborative efforts of healthcare professionals, physical therapists, and occupational therapists aim to enhance the overall well-being and independence of mycetoma patients. Through personalized care and rehabilitation interventions, patients can achieve meaningful improvements in their quality of life and regain a sense of control over their health.

- Collaborate with physical therapists and occupational therapists to develop individualised mobility and rehabilitation plans for mycetoma patients, especially those with functional limitations.
- Assist patients with activities of daily living and encourage them to participate in rehabilitation exercises to improve strength, flexibility, and mobility.

Nutritional Support

Nutritional support plays a vital role in the management of mycetoma patients, as it can significantly impact wound healing, immune function, and overall health. Healthcare professionals involved in the care of mycetoma patients should prioritise assessing their nutritional status to identify and address any deficiencies or malnutrition that may hinder recovery.

The first step in providing nutritional support is conducting a thorough assessment of the patient's nutritional status. This assessment may involve evaluating dietary intake, conducting anthropometric measurements, and assessing biochemical markers to identify deficiencies in essential nutrients such as protein, vitamins, and minerals. Special attention should be given to patients with chronic wounds, as they may have increased nutritional requirements to support tissue repair.



Collaboration with dietitians is essential in developing personalized nutrition plans tailored to the individual needs of mycetoma patients. Dietitians can provide expert guidance on optimizing dietary intake to support wound healing and overall health. These nutrition plans may include recommendations for nutrient-dense foods that are rich in protein, vitamins (particularly vitamin C and vitamin A), minerals (such as zinc and iron), and antioxidants to enhance immune function and promote tissue repair.

In addition to addressing specific nutrient deficiencies, healthcare professionals should encourage mycetoma patients to consume a balanced diet that meets their energy and nutrient needs. This includes emphasizing the importance of consuming adequate protein to support tissue regeneration, as well as promoting a variety of fruits, vegetables, whole grains, and healthy fats to provide essential vitamins and minerals.

Education plays a crucial role in promoting dietary adherence and empowering patients to make healthier food choices. Healthcare professionals should provide patients with information on the importance of nutrition in wound healing and overall health, as well as practical tips for incorporating nutrient-rich foods into their diet. Additionally, ongoing monitoring and support are essential to ensure that patients are able to maintain adequate nutritional intake throughout their treatment and recovery.

By addressing nutritional deficiencies and promoting a balanced diet rich in essential nutrients, healthcare professionals can optimize the nutritional status of mycetoma patients and support their overall well-being and recovery. Nutritional support, in conjunction with other aspects of comprehensive care, plays a critical role in improving outcomes and enhancing the quality of life for individuals affected by mycetoma.

Psychosocial Support

Furthermore, healthcare professionals should collaborate with multidisciplinary team members, including social workers, Chaplains and Imams, and patient advocates, to address the diverse psychosocial needs of mycetoma patients comprehensively. By integrating psychosocial support into the overall care plan, healthcare professionals can enhance the patient's overall well-being, resilience, and quality of life despite the challenges posed by mycetoma.

- Assess the patient's psychosocial needs and provide appropriate support and resources, such as counselling services, support groups, or referrals to mental health professionals.
- Foster a compassionate and nonjudgmental environment that respects the patient's autonomy and dignity.

Psychosocial support is integral to the holistic care of mycetoma patients, as the condition can have significant psychological and emotional implications for affected individuals. Healthcare professionals should prioritize assessing patients' psychosocial needs and providing appropriate support and resources to address these concerns.



The assessment of psychosocial needs involves evaluating various factors such as the patient’s emotional well-being, coping mechanisms, social support networks, and any pre-existing mental health conditions. This assessment can be conducted through open-ended discussions, standardized questionnaires, or observations during clinical encounters. By understanding the unique challenges and stressors faced by mycetoma patients, healthcare professionals can tailor support interventions to meet their specific needs.

One key aspect of psychosocial support is providing access to counselling services or mental health professionals who specialize in addressing the emotional and psychological aspects of chronic illness. These professionals can offer individual or group therapy sessions to help patients cope with feelings of anxiety, depression, fear, or grief related to their condition. Counselling can also provide patients with coping strategies, stress management techniques, and tools for building resilience.

In addition to formal counselling services, healthcare professionals may facilitate connections with support groups or peer networks where patients can share experiences, exchange information, and provide mutual support. Support groups offer a valuable platform for patients to connect with others who understand their challenges, reducing feelings of isolation and fostering a sense of belonging. Participation in support groups can also provide patients with practical advice, coping strategies, and a source of encouragement from others who have faced similar experiences.

Creating a compassionate and nonjudgmental environment is essential in providing effective psychosocial support to mycetoma patients. Healthcare professionals should demonstrate empathy, active listening, and respect for patients’ autonomy and dignity throughout the care process. Open communication, validation of patients’ emotions, and validation of their experiences are crucial in building trust and rapport with patients, facilitating their willingness to seek and engage with support services.

Follow-up and Monitoring

Follow-up and monitoring are essential components of the comprehensive care plan for mycetoma patients, ensuring that their progress is tracked, treatment efficacy is evaluated, and any emerging concerns or complications are promptly addressed. Healthcare professionals play a crucial role in scheduling regular follow-up appointments and maintaining open communication with the healthcare team to optimize patient outcomes.

Regular follow-up appointments are scheduled to monitor the patient's response to treatment and assess their overall condition. During these appointments, healthcare professionals conduct thorough evaluations, which may include clinical examinations, imaging studies, laboratory tests, and patient-reported outcomes assessments. These evaluations help healthcare providers gauge the effectiveness of the current treatment regimen, identify any signs of disease progression or recurrence, and detect any potential complications early on.

In addition to monitoring the patient's physical health, follow-up appointments provide an opportunity to address the patient's psychosocial needs, assess their quality of life, and offer support and guidance as needed. Healthcare professionals engage in open and empathetic communication with patients, encouraging them to express any concerns, challenges, or questions they may have about their condition or treatment.

Maintaining open communication with the healthcare team is crucial for facilitating coordinated care and optimizing patient outcomes. This involves regular exchange of information and collaboration among multidisciplinary team members, including physicians, nurses, pharmacists, physical therapists, occupational therapists, dietitians, mental health professionals, and other specialists involved in the patient's care. Through interdisciplinary teamwork, healthcare providers can ensure that all aspects of the patient's health and well-being are addressed comprehensively.

Furthermore, healthcare professionals utilize electronic health records (EHRs) and other communication tools to share pertinent

information, document treatment plans and progress notes, and coordinate follow-up care seamlessly. This enables continuity of care and ensures that all members of the healthcare team are well-informed and aligned in their approach to managing the patient's condition.

Patient education and empowerment are also integral components of follow-up and monitoring. Healthcare professionals provide patients with information about their condition, treatment options, and self-management strategies, empowering them to take an active role in their care. Patients are encouraged to adhere to their treatment plan, follow lifestyle recommendations, and report any changes in their symptoms or overall health to their healthcare provider promptly.

By prioritising regular follow-up appointments, maintaining open communication with the healthcare team, and empowering patients to participate in their care actively, healthcare professionals can optimize the management of mycetoma patients and improve their long-term outcomes and quality of life.

Preventive Measures

Preventive measures play a crucial role in reducing the risk of mycetoma recurrence or transmission and promoting the overall well-being of affected individuals. Healthcare professionals should prioritise patient education and empowerment to ensure that individuals are equipped with the knowledge and skills necessary to prevent future episodes of mycetoma. Key preventive measures include proper wound care, foot hygiene, and avoidance of exposure to contaminated soil or water.

First and foremost, patients must be educated about the importance of proper wound care to prevent the development or exacerbation of mycetoma lesions. This includes keeping wounds clean, dry, and covered with sterile dressings to reduce the risk of infection. Patients should be instructed on how to recognise signs of infection, such as redness, swelling, warmth, or discharge, and advised to seek prompt medical attention if these symptoms occur.



In addition to wound care, patients should be educated about the importance of foot hygiene in preventing mycetoma recurrence. This includes washing and drying the feet thoroughly, especially after exposure to soil or water, and wearing clean, well-fitting shoes and socks to minimize the risk of injury or infection. Patients with pre-existing foot deformities or conditions, such as diabetes or peripheral neuropathy, should receive special attention and guidance to prevent complications.

Furthermore, patients should be informed about the potential sources of mycetoma-causing fungi in their environment and advised to take precautions to avoid exposure. This may involve avoiding walking barefoot in areas where the soil is known to be contaminated with fungal spores, such as agricultural fields or construction sites, and using protective footwear or barriers when engaging in outdoor activities.

Long-term follow-up is essential for detecting any signs of mycetoma recurrence or complications early and initiating appropriate interventions promptly. Patients should be encouraged to adhere to recommended follow-up appointments with their healthcare provider, which may include regular clinical evaluations, imaging studies, and laboratory tests to monitor their condition. During follow-up visits, healthcare professionals can assess the patient's wound healing progress, evaluate treatment efficacy, and address any emerging concerns or complications.

Overall, patient education, adherence to preventive measures, and regular follow-up are critical components of comprehensive mycetoma management. By empowering patients with the knowledge and skills to prevent recurrence and promoting proactive monitoring of their condition, healthcare professionals can help individuals affected by mycetoma lead healthier, more fulfilling lives.

