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Madura Foot that Presented like Soft Tissue Sarcoma

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Abstract: ***79 years old female agricultural worker in a farm gardening and taking care of farm animals from Al- Baha western region in Saudi Arabia presented with a 7-year history of left plantar foot soft tissue mass. According to the patient, the swelling had gradually increased in size over a few years, but it was painless and thus had not restricted him from continuing to farm until the lesion started to affect mobility. An X-ray, MRI, and histopathology reported a rare infectious agent Antinomies spp, otherwise referred to as Madura foot. Three-dimensional CT aided in a preoperative surgical plan which included mass excision/ debunking for this challenging lesion. Patient required prolonged anti-infective therapy (> 4 months) after follow the patient improved and not has any pain or recurrence of lesion or infection.***
Keyword: Madura Foot, Mycetoma, Biopsy lesion, Actinomycosis, eumycetoma

I. INTRODUCTION

Mycetoma was first documented in the mid-nineteenth century and was dubbed "Madura foot" after Madurai, Tamil Nadu, India, where the illness was discovered [(1)]. Madura foot, also known as mycetoma, is a chronic and progressive subcutaneous granulomatous infection characterized by a triad of painless swelling and tumefaction, draining sinus tracts, and granulomatous discharge [(2)]. An infection produced by fungus is referred to as a eumycetoma, whereas an infection caused by filamentous bacteria is referred to as an actinomycetoma [(3)].

Actinomycosis is a rare infectious disease that frequently manifests as a chronic pathology owing to misdiagnosis or patients' unwillingness to seek prompt medical attention [(4)]. Because of the organism's endogenous environment, primary Actinomyces spp. infection of the lower extremities is quite rare. It can cause damage to both the skin and soft tissue, as well as proceed deeper into the body to affect the bone [(5)]. The cases can be difficult to identify and manage, especially when tumefaction is present.

Surgical planning is required to ensure the most effective excision of the mass is achieved and imaging modalities such as three-dimensional (3D) CT, MRI and X-ray may aid in the preoperative planning phase [(6)]. Overall, the goal of a surgical approach is to reduce the need for anti-infective medication for a long time. Mycetoma is often found in tropical and subtropical settings, preferring dry and arid conditions such as Saudi Arabia. Some rare cases of eumycetoma in the foot can look like squamous cell carcinoma or soft tissue sarcoma. Only after surgical excision and biopsy the disease can be diagnosed [(7)].

II. CASE REPORT

1) *Description of Case:* 79 years old female, asthma Presented to the Fakeeh clinic in Jeddah, Saudi Arabia for the first time on 25 Jan 2020 complaining of left foot mass not painful that has been there for 7 years and is slowly growing in size, she noticed it when she was at Al baha western region in Saudi Arabia were she was working in a farm gardening and taking care of farm animals, it was very small in size according to the patient pea sized in the beginning then started growing gradually.
2) *The Symptoms:* Patient has no constitutional symptoms, no loss of appetite weight loss night sweats
3) *On Examination:* (First stage)

The first time on Jan 2020, the Patient was afebrile conscious alert oriented, Walking normally, Lateral aspect of left foot mass noted around 2X 2Cm non tender soft mass .The swelling of variable consistency (alternately firm and fluctuating) was seen over the dorsolateral foot infiltrating the surrounding structures including extensor tendons and skin.

III. INVESTIGATION

The Images of x- ray and MRI Showed lesion at the lateral aspect of the foot MRI showed soft tissue lesion at lateral plantar aspect of the foot measuring 2.3 X 4 X 2.1 cm with sinuses laterally suggesting doing tissue diagnosis. Patient was planned for surgery to biopsy the lesion but she refused.

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Fig 1. X-ray and MRI showing lateral foot lesion

A. On Examination: (Second stage)

Patient came back to the clinic after one year later around 15 Feb 2021.after the examination of the patient left foot observed that the mass has grown over the last year which extending to the sole of the foot measuring 5X5 cm soft mobile with mild tenderness .it has not painful but difficult for the patient wearing shows and walking which causing discomfort.

B. Laboratory Investigation

All Laboratory diagnosis for the patient were within normal except for high ESR

1) White Blood Cells (WBCs) : 4.04
2) C Reactive protein (CRP): 1.18
3) ESR: 27

C. Surgery Biopsy and excision of the lesion

1) Patient afebrile conscious alert oriented
2) Patient booked for OR for biopsy of the lesion and Intraop once incision done for biopsy there was discharge from the lesion biopsy taken and wound closed
3) Biopsy came back after 1 week suggesting infection and no malignancy
4) Patient was booked again for total resection of tumor as whole and for culture and biopsy of the lesion

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Fig 2. Post biopsy of the lesion

D. The Diagnosis

1) Biopsy Showed: Actinomycotic mycetoma which called (MADURA FOOT)

E. Post operation and Treatments

1) Post operation the patient presented to the clinic doing well, wound dry clean minimal discharge

2) After an infectious disease consultation, the patient was started on antifungal and antibacterial therapy, and the patient's laboratory investigation and condition were monitored throughout the treatment time.

3) The patient received (Itraconazole) oral for 6 weeks as antifungal then stopped one month and started again the medication course of 6 weeks to avoid recurrence



Fig 3. Post excision

F. Outcome and follow-up

Patient kept following in the clinic for dressing, patient's pain and discomfort with shoe wear was improved in four months follow up patient doesn't have any pain and recurrence of lesion or infection and is doing well.

IV. DISCUSSIONS

The aforesaid patient had a 7-year history of nodular swelling in his left foot (Madura foot), but it was overlooked from the patient itself and us since we were predisposed to a sarcoma diagnosis. This background was most likely relevant because he mentioned walking barefoot in the early portion of his existence. It is generally known that eumycetoma can remain benign for several years, especially in immunocompetent people [(8)]. Wherever feasible, identifying the precise kind of fungus using fungal culture or other sophisticated techniques plays a role in determining the best treatment plan. However, the culture needs a month of incubation in specialized conditions, and even then, the organism may not be identified [(9)]. It's not a good idea to wait this long to start therapy, especially since recurrence rates are substantial even with long-term treatment [(10)].

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In Saudi Arabia, facilities for fungal cultures and other types of cultures are most common. Other advanced investigations are difficult to come by [(11)]. Because the therapy for an actinomycetoma, which is caused by aerobic bacteria, and a eumycetoma, which is caused by real fungus, is vastly different, it is important to distinguish between the two. Histologic examination, cytology, culture, and immu no staining can all be used to make this crucial difference [(12)].

Because histopathology is readily available in any area of Saudi Arabia, it should serve as the foundation for developing a therapeutic approach for these patients. Patients with eumycetoma should take itraconazole and undergo rigorous surgical debridement [(13)]. Actinomycetoma usually responds to antibacterial medicines alone in the early stages of the disease [(14)]. Depending on the causative organism and its sensitivity, several treatment approaches can be utilized. It should be noted, however, that eumycetoma recurrences are more likely than actinomycosis recurrences [(15)].

V. CONCLUSIONS

A high suspicion index for an infectious agent creating a focal mass is crucial to maintain. In this context, it is important to recall the maxim: biopsy of each infection and culture of each tumor.

A. Conflict of Interests

The authors declare that they have no conflict of interests.

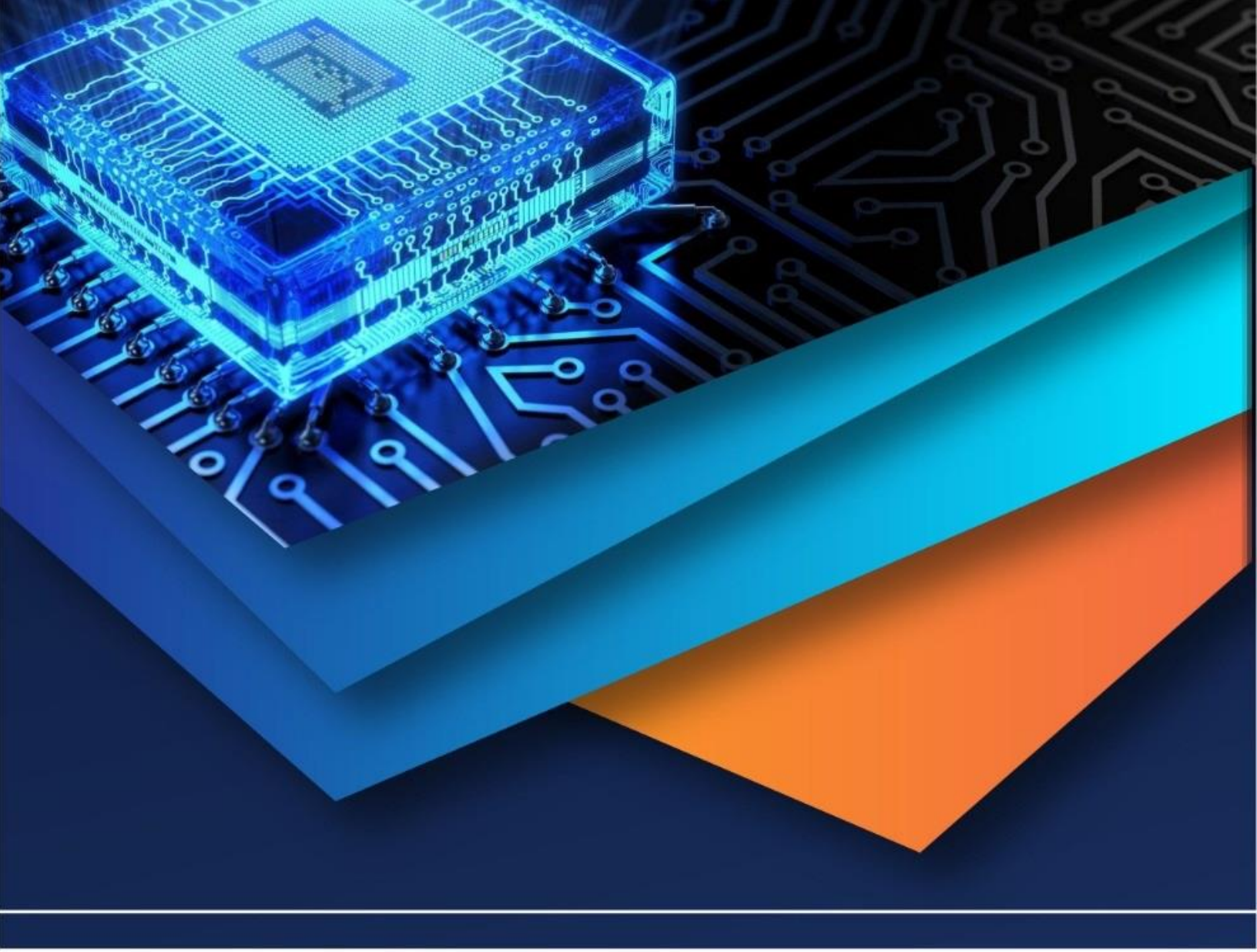
B. Authors' Contribution

Dr.Zahra followed up the patient from admission to discharge from Fakeeh clinic injedah, saudi Arabia and collected, analyzed, and interpreted the data. Dr.Zahra collected and assisted in the interpretation of the data. The author read and approved the final paper.

REFERENCES

[1] Relhan V, Mahajan K, Agarwal P, Garg VK. Mycetoma: an update. Indian J Dermatol 2017;62(4):332–40.
[2] Guerra-Leal JD, Medrano-Danés LA, Montemayor-Martinez A, Pérez-Rodríguez E, Luna-Gurrola CE, Arenas-Guzman R, et al. The importance of diagnostic imaging of mycetoma in the foot. Int J Dermatol , 2019;58(5):600–4.
[3] S arris I, Berendt AR, Athanasous N, et al. MRI of mycetoma of the foot: two cases demonstrating the dot-in-circle sign. Skeletal Radiol 2003;32:179–83.
[4] Alam K, Maheshwari V, Bhargava S, Jain A, Fatima U, Haq EU. Histological diagnosis of madura foot (mycetoma): a must for definitive treatment. J Glob Infect Dis 2009; 1(1):64–7.
[5] Sen A, Pillay RS. Case report: dot-in-circle sign – an MRI and USG sign for "Madura foot". Indian J Radiol Imaging 2011;21(4):264–6.
[6] Wadal A, Elhassan TA , Zein HA, et al. Predictors of post-operative mycetoma recurrence using machine-learning algorithms: the mycetoma research center experience. PLoS Negl Trop Dis 2016;10:e0005007–11.
[7] Laohawiriyakamol T, Tanutit P, Kanjanapradit K, Hongsakul K, Ehara S. The "dot-in-circle" sign in musculoskeletal mycetoma on magnetic resonance imaging and ultrasonography. Springerplus 2014; 3:671.
[8] Sen A, Pillay RS. Case report: dot-in-circle sign – an MRI and USG sign for "Madura foot". Indian J Radiol Imaging, 2011;21(4):264–6.
[9] Maina AM, Macharia JT. Alleviating a Nomad's Anguish: Successful Treatment of a Case of Leg Mycetoma—A Case Report. Case Reports Orthop. 2012 [cited 2013 Jul 12]; 2012. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3518950/.
[10] A lam K, Maheshwari V, Bhargava S, et al. Histological diagnosis of madura foot (mycetoma): a must for definitive treatment. J Glob Infect Dis 2009;1:64–7.
[11] Malone M, Gannass A, Bowling F. A chronic, destructive mycetoma infection in a diabetic foot in Saudi Arabia. Int J Low Extrem Wounds , 2011;10:12–15.
[12] Ahmed M, Sureka J, Chacko G, Eapen A. MRI findings in cranial eumycetoma. Indian J. Radiol. Imaging.2011;21(4):261–3.
[13] Afroz N, Khan N, Siddiqui FA, Rizvi M. Eumycetoma versus actinomycetoma: Diagnosis on cytology. J. Cytol. Indian Acad. Cytol. 2010 Oct;27(4):133–5.
[14] Fraser M, Borman AM, Johnson EM. Rapid and robust identification of the agents of black-grain mycetoma by MALDI-ToF mass spectrometry. J Clin Microbiol , 2017;55:2521–8.
[15] Alam K, Maheshwari V, Bhargava S, Jain A, Fatima U, Haq E ul. Histological Diagnosis of Madura Foot (Mycetoma): A Must for Definitive Treatment. J. Glob. Infect. Dis. 2009;1(1):64–7

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