



Eumycotic Mycetoma of Thigh

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Abstract

Introduction: *Mycetoma is a chronic and progressive subcutaneous granulomatous infection characterized by painless swelling, draining sinus tracts, and purulent discharge. The term eumycetoma is used to describe an infection caused by fungi, while an actinomycetoma is used to describe an infection caused by filamentous bacteria.*^[1]

Case Description: *We describe a case report of a 56 years old man who presented with swelling on left thigh since 1 year. Clinically swelling resembled lipoma/soft tissue tumor as it presented as well circumscribed mass and there was no skin involvement/discharging sinuses. Final diagnosis of mycetoma was made on histopathological examination. Patient had complete resolution of symptoms after excision and anti fungal treatment.*

Conclusion: *Mycetoma without skin involvement is very unusual presentation. Clinically it is very difficult to identify swelling as mycetoma unless there is skin involvement/discharging sinuses or high index of suspicion.*^[2] *Careful histopathological examination and anti fungal treatment thus becomes very important in such cases.*

Keywords: *Mycetoma thigh, unusual presentation, eumycoticmycetoma, tenosynovial giant cell tumor, discharging sinus, fungal filaments, lipoma.*

Introduction

Case Description

A 56 years old male with no significant medical and surgical history presented with gradually increasing swelling over medial aspect of left thigh. Swelling was painless throughout course of disease and no obvious etiological factor could be identified. Patient had no complain of difficulty in walking or in knee movements. There was no history of fever, trauma or any discharge though swelling.

On examination, general examination was essentially within normal limits. On local examination, a well-defined, firm, freely mobile, non-tender swelling of size 6x4x2 cm was present over medial aspect of left thigh just above left knee joint, however there was no restriction of left knee joint movements. There were no skin changes and swelling was free from underlying structures and overlying skin as evident by free mobility of swelling. There was no evidence of palpable inguinal lymphadenopathy. Clinically swelling resembled lipoma/soft tissue tumor.

Blood investigations and X ray local part were within normal limits.

Hence FNAC was ordered. FNAC examination showed tenosynovial giant cell tumor.

MRI of local part revealed a presence of moderately large subcutaneous mass in right medial lower thigh region of size 7x5x3.3 cm which appears heterogeneously hyperintense on STIR and T2 images. Peripheral hypointense areas with hypointense internal septae seen and internal blood products seen. Post contrast study show heterogenous enhancement with non-enhancing multiple internal cystic areas.

As swelling was well circumscribed as evident on CT scan, decision for wide local excision of swelling was taken. Lazy S shaped incision taken over swelling and deepened till capsule is reached. Intra operatively swelling was found to be attached to long tendons of thigh muscle however it could be dissected away easily. Post op was uneventful and patient was discharged on post op day 3 after removal of drain.

Histopathological report of the swelling on cut section showed multiple abscesses within dense collagenous tissue with central areas of breakdown containing granules bordered by neutrophils and dense infiltrate containing neutrophils, eosinophils and lymphoplasma cells. Clusters of foamy histiocytes, multinucleated giant cells and cholesterol cleft also seen. On PAS staining septate fungal filaments were identified within granulomas. Findings were consistent with eumycoticmycetoma. Post operatively patient was started on antifungal (ketoconazole) and was found symptom free at 3 months interval.



Figure 1-3. Swelling as seen from medial, superior aspect. (From left to right.)

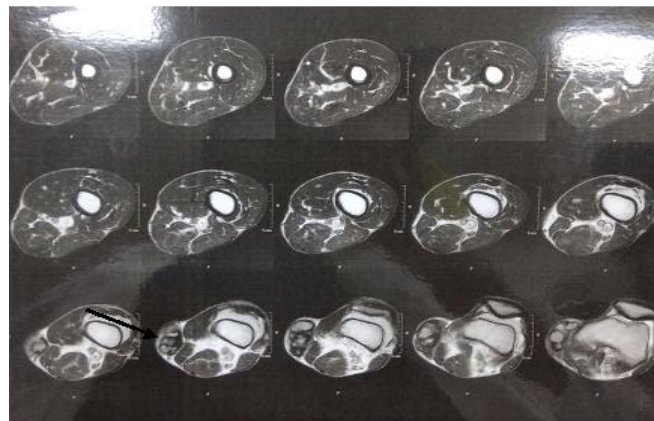


Figure 4 Coronal MRI cut showing well circumscribed swelling on medial aspect of thigh as shown by arrow



Figure 5 Sagittal MRI cut showing swelling on medial aspect



Figure 6: Excised surgical specimen



Figure 7 H & E stain showing micro abscesses

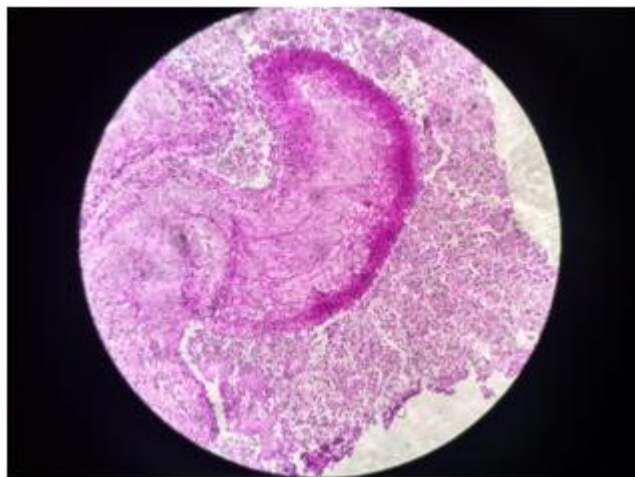


Figure 8 PAS stain showing fungal filament

Discussion

Mycetoma also called as Madura foot or Maduramycosis is a chronic granulomatous inflammatory condition caused by either bacteria or fungi. It is called as eumycetoma when caused by fungi and actinomycetoma when caused by filamentous bacteria. Actinomycosis progresses rapidly than Eumycosis.^[1]

The fungal agents of mycetoma include *Pseudallescheria boydii*, *Madurella mycetomatis*, *Madurella grisea*, *E. jeanselmei* and *Acromonium falciforme*.^[1] It is common in tropical countries like India. Barefoot walking, malnutrition, trauma, poor hygiene are some of the identified risk factors. So-called Mycetoma belt includes India, Sudan, Nigeria, Middle East, Mexico, Argentina and few other countries with similar climate conditions.^[3]

It usually affects bare foot walkers and the foot is commonly involved. However, the leg, thigh and upper extremity may also be involved. The causative organism is present in soil and following trauma, skin inoculation leads to swelling formation. Usual presenting features consist of painless progressive swelling, purulent/serous/serosanguinous discharge and discharging sinuses. Discharge has granules which help in identification of the pathogen. Skin over swelling is usually thickened, pigmented and has multiple discharging sinuses. It spreads locally by causing

hypersensitivity reaction and causes tissue destruction. Without treatment, the disease may progress to deformities and loss of function which may require amputation at a later stage.^[1]

Conclusion

Mycetoma usually presents as swelling with discharging sinuses more commonly on the foot. It is common in farmers and bare foot walkers and in tropical countries like India. In case of absence of typical presenting features and unless there is high clinical suspicion, diagnosis becomes difficult. Final diagnosis is obtained after histopathological examination of the excised specimen following which the patient is to be treated with antifungals to achieve a complete cure.

References

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