DOI: https://doi.org/10.53350/pjmhs22165208

CASE REPORT

A case of Fungal Carbuncle in an Immune competent person

MUHAMMAD UMAIR BUTT[1], MUHAMMAD ALMAS MURAD[2], MUHAMMAD AFZAL[3]
[1,2]Postgraduate Resident General Surgery, Ittefaq Hospital Trust Lahore
[3]Professor & Head of Department Surgery, Ittefaq Hospital Trust Lahore
Correspondence to Dr. Muhammad Umair Butt, Email: buttumair87@gmail.com, Cell: 0321-8418084

SUMMARY

Mucormycosis is vessel invading fungal infection and have a very poor prognosis around the globe. It is mostly seen in immunocompromised people but a rare finding can occur in normal people also, however a deep seated cutaneous infection is rare in surgery domain.Multiple types of Mucormycosis have been reported in literature with the cutaneous manifestation being the least common, tissue diagnosis by biopsy followed by antifungals and surgical debridement's lead to the only treatment modalities available.A carbuncle which basically is a contiguous hair follicle infection that discharges pus from multiple tracts due to abscess underneath the skin.

Keywords: Carbuncle, fungus, mucor**mycosis**

INTRODUCTION

Mucormycosis is vessel invading fungal infection and have a very poor prognosis around the globe[1]. It is mostly seen in immunocompromised people but a rare finding can occur in normal people also, however a deep seated cutaneous infection is rare in surgery domain[2]. A carbuncle which basically is a contiguous hair follicle infection that discharges pus from multiple tracts due to abscess underneath[3]. Mucormycosis can be caused by various organism mostly encountering Rhizopus spp, Mucor spp and they are often picked late on as a diagnosis thus are a need of hour for special attention[4].

CASE REPORT

A 26 year old male patient presented to the emergency department with complaints of painful swelling in the left axilla along with fever for 11 days. On examination he was a young obese man with normal vitals and the lesion was a circular 2×4 cm purplish lesion with surrounding erythema, increased temperature and tenderness was present. The patient had no comorbidities other than a weight of 116 Kg. He gave a history of multiple antibiotic uses but got no relief. Patient was admitted with a working diagnosis of Carbuncle left axilla. The laboratory investigations showed a TLC of 36.1 (Neutrophils 90) rest of the labs were unremarkable, he was further planned for Incision and Drainage of abscess along with debridement under general anesthesia. The procedure showed that there was a dead necrotic flap involving deep muscles on the lateral aspect and inferior of left axilla. Pus and Tissue was sent for Culture and Sensitivity. The TLC count raised to 40.1 and the patient started having fever spikes of 102 F. Infectious Disease Team was involved who suggested to start patient on Vancomycin and Meropenem stating further that the patient needs aggressive debridement. Patient was again planned for debridement as the necrotic tissue increased in amount but this time the procedure showed a heavy rough leathery growth. The Culture sensitivity report showed colonization of Staphylococcus aureus along with a heavy growth of Mucor species (Note that the patients HbA1C was 5.6). The TLC count was 46.1 now and the patient was in full blown sepsis. The attendants were counseled about the grave prognosis. Thus after taking Infectious Disease team on board Amphotericin B was started along with Augmentin changing the treatment chart of the patient. Regular RFTs and Serum Electrolytes were done and Nephrology team was kept in the loop to monitor any kidney injury to the patient due to Amphotericin B. As the patient lost a major bulk of muscle thus physiotherapy was started. After a total of 7 debridement procedures, 21 days of antifungal treatment and daily dressings in BD the TLC count dropped to 5.6. The patient's fever settled wound was healthy and granulating. Culture reports came out to be negative with all other labs being unremarkable. Plastic Surgery team is currently being taken on board for further management of the patient.

Received on 13-10-2021
Accepted on 26-04-2022

Figure 3: After last debridement

Figure 1: At presentation

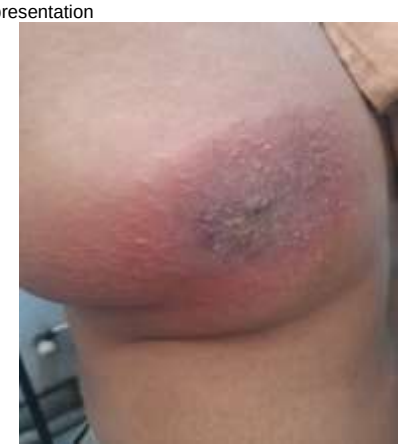

Figure 2: After third debridement

DISCUSSION

Mucormycosis is a fungal infection caused by organism of the phylum Glomeromycota. Having a nonspecific starting of infection leading to an extensive necrosis is a common finding.[5] Multiple types of Mucormycosis have been reported in literature with the cutaneous manifestation being the least common, tissue diagnosis by biopsy followed by antifungals and surgical debridement's lead to the only treatment modalities available.[6] Mortality rates by the disease range from 4 to 10 % in localized form. [7] Most common risk factors being Diabetes and Hematological malignancies when cutaneous barrier has been breached and the organism allowed to grow[8].

Interesting fact about our patient states that he was non diabetic and had no comorbidities however in literature the disease is associated with immunocompromised states and to our knowledge none to very few cases of fungal carbuncle due to Mucor species have been reported other than cases associated with cerebral disorders or GIT. [9]

CONCLUSION

Although mostly associated with immunocompromised states Mucor can occur in other patients also, if response to therapy and incision and drainage isn't happening one should keep this at the back of their mind. Such patients need to be identified and dealt accordingly as the disease aggravates quickly.

Disclaimer: None

Conflict of Interest: None

REFERENCES

1. Singh P, Arora S, Mittal N, Singh A, Verma R, Sharma S, Agrawal NK, Goyal S. Diabetes and rhino-orbito-cerebral mucormycosis–A deadly duo. Journal of Diabetes & Metabolic Disorders. 2021 Jan 21:1-7.
2. Samuel DM, Bharath N, Prabu M, Rahman K, Rekha A. Fungal Carbuncle Due to Apophysomyceselegans—A Case Report. Case Reports in Clinical Medicine. 2019 Jan 8;8(1):21-8.
3. Mittal S, Sarkar R. Skin infections. InConcise Dermatology 2021 Mar 4 (pp. 19-44). CRC Press.
4. Prakash H, Chakrabarti A. Epidemiology of mucormycosis in India. Microorganisms. 2021 Mar;9(3):523.
5. Castrejón-Pérez AD, Welsh EC, Miranda I, Ocampo-Candiani J, Welsh O. Cutaneous mucormycosis. Anais brasileiros de dermatologia. 2017 May;92:304-11.
6. Arnáiz-García ME, Alonso-Peña D, del Carmen González-Vela M, García-Palomo JD, Sanz-Giménez-Rico JR, Arnáiz-García AM. Cutaneous mucormycosis: report of five cases and review of the literature. Journal of Plastic, Reconstructive & Aesthetic Surgery. 2009 Nov 1;62(11):e434-41.
7. Skiada A, Petrikkos G. Cutaneous mucormycosis. Skinmed. 2013 May 1;11(3):155-9.
8. Skiada A, Drogari-Apiranthitou M, Pavleas I, Daikou E, Petrikkos G. Global Cutaneous Mucormycosis: A Systematic Review. Journal of Fungi. 2022 Feb 16;8(2):194.
9. Kaur H, Ghosh A, Rudramurthy SM, Chakrabarti A. Gastrointestinal mucormycosis in apparently immunocompetent hosts—A review. Mycoses. 2018 Dec;61(12):898-908.