

CUTANEOUS MUCORMYCOSIS: A REPORT OF 2 CASES

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CASE REPORT: 1

- 50 year old male from Jharkhand
- Indurated nodular lesions over the left axilla and shoulder for 4 months, with overlying necrotic skin
- Diabetic for 10 years with poor glycaemic control

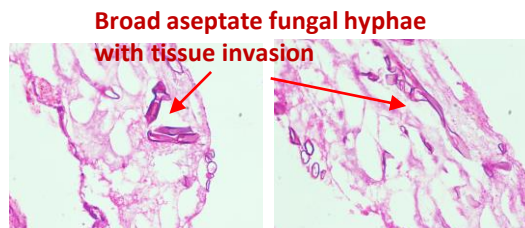
EXAMINATION

Multiple tender indurated nodules with overlying necrotic skin over the right shoulder

HISTOPATHOLOGY

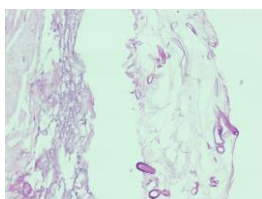


H & E stain 40x

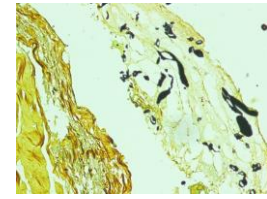


H & E stain 200x

H & E stain 200x



PAS stain 200x



GMS Stain 200x

INVESTIGATIONS

- Hb 8.9g/dl; WBC 33,700/cmm (N94, LY 2 MO 4)
- HBA1C > 14
- Urea 62mg% Creatinine 2.35mg%
- Culture fungus : **Rhizopus arrhizus**

DIAGNOSIS: CUTANEOUS MUCORMYCOSIS

CASE REPORT:2

- 24 year old female from Sri Lanka
- CML, post allogenic stem cell transplant (day +193)
- Fever and breathlessness for one week and nodular lesions over the thighs for 3 days

EXAMINATION

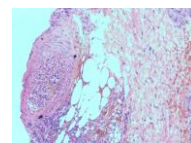
6x6cm fluctuant swelling over the right thigh lateral aspect with hyperpigmented centre

HISTOPATHOLOGY

Dermal haemorrhage



H & E 40x

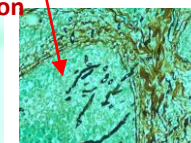


H & E 100x

Broad aseptate fungal hyphae with angioinvasion



GMS 100x

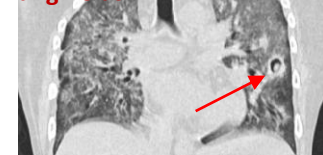


GMS 200x

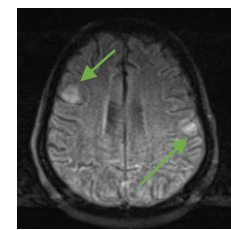
INVESTIGATIONS

- Hb 8.5g/dl; WBC 2100/cmm; (N 12 L 32 M 5)
- Creatinine 2.3 mg%
- Aspergillus galactomannan 3.211
- Fungal culture : **Aspergillus flavus**

Ground glass opacities in both lung fields



HRCT Thorax- Coronal section (air crescent sign-red arrow)



MRI Brain- T2W-axial section Rounded hyperintense areas (green arrow)

DIAGNOSIS: CUTANEOUS MUCORMYCOSIS WITH DISSEMINATED FUNGAL INFECTION

DISCUSSION

- Cutaneous mucormycosis is an aggressive invasive fungal infection mostly seen in immunocompromised patients caused by Zygomycetes from the order of Mucorales and includes various genera like, *Mucor*, *Rhizopus*, *Rhizomucor* and *Absidia*.
- Predisposing factors include diabetes, hepatic or renal failure, malnutrition, malignancies, organ transplant recipients, corticosteroid use, AIDS etc.
- Can manifest in different clinical forms including rhino-orbito-cerebral mucormycosis (44–49%), cutaneous mucormycosis (10–19%), pulmonary mucormycosis (10–11%), disseminated mucormycosis (6–11%), gastrointestinal (2–11%).
- Early diagnosis is essential to prevent fungal dissemination and prevent mortality
- Presumptive diagnosis involves demonstration of irregularly shaped broad aseptate, thick walled fungal hyphae with right angle branching and vascular invasion on histopathology.
- Management includes a combination of systemic antifungal therapy, mainly amphotericin B and azoles, aggressive surgical debridement, along with management of underlying primary medical co-morbidities or immunosuppressive state.

CONCLUSION

- Cutaneous mucormycosis, is a rare yet potentially fatal form of mucormycosis mostly seen in immunocompromised individuals
- Histopathology plays a pivotal role in early diagnosis by identification of fungal hyphae, as cultures are time consuming and might not isolate the organism.

REFERENCE

- J.A. Ribes, C.L. Vanover-Sams, J. Baker; **Zygomycetes in human disease**; Clin Microbiol Rev, 13 (2000), pp. 236-301
- A.M. Sugar; **Agents of mucormycosis and related species**; G.I. Mandell, J.E. Bennett, R. Dolin (Eds.), Mandell, Douglas, and Bennett's
- Principles and practice of infectious diseases (6th ed.), Elsevier, Philadelphia (2006)

- J.L. Frater, G.S. Hall, G.W. Procop **Histologic features of zygomycosis: emphasis on perineural invasion and fungal morphology**; Arch Pathol Lab Med, 125 (2001), pp. 375-378
- I.J. Umbert, D. Su; **Cutaneous mucormycosis**; J Am Acad Dermatol, 21 (1989), pp. 1232-1234