

Cerebral phaeohyphomycosis in liver transplant recipient: a case report

INTRODUCTION

Cerebral phaeohyphomycosis is a CNS fungal infection caused by dematiaceous fungi.

Dermatocytous fungi are present in soil and decaying vegetation. Most common infections are reported in tropics and subtropics.

The disease has a slow course; however, the mortality can reach up to 100%.

Average survival post diagnosis is up to 4.7 months.

CASE DESCRIPTION

57 years old male, farmer with past history of liver transplant secondary to hepatitis B and D co-infection, presented with 2 weeks of painless blurred vision followed by 1 week of continuous high-grade fever, diffuse dull-headache, vomiting 3-5/day.

Vitals:

HR 78/minute
BP 124/82
RR 18/minute
Temp - 101° F

Examination:

GCS 15/15
Negative cranial nerve, motor, sensory, cerebellar examination. Meningeal Signs were negative.
Normal Chest and Abdominal exam.

Labs:

Complete blood count showed:
neutrophilic leukocytosis
12.4 x 10⁹/L
CRP was raised - 12.1 mg/L.

Electrolytes - Normal
Liver function test - Normal
Renal function tests – Normal

Blood cultures x 2 – No growth
Chest Xray – Unremarkable

CLINICAL COURSE

CT of the brain demonstrated a ring-enhancing cystic lesion 3.4 centimeters X 2.5-centimeter X 3.9 centimeters in the left parieto-occipital region.

MRI brain showed single ring-enhancing parieto-occipital lesion.

IV meropenem and vancomycin were started for the patient.

Patient had a craniotomy and evacuation of abscess – 200 mL of thick dark pus was drained. Organism identified as *Rhinoctadiella mackenziei*

Antibiotics were discontinued and patient received voriconazole 400 mg twice daily.

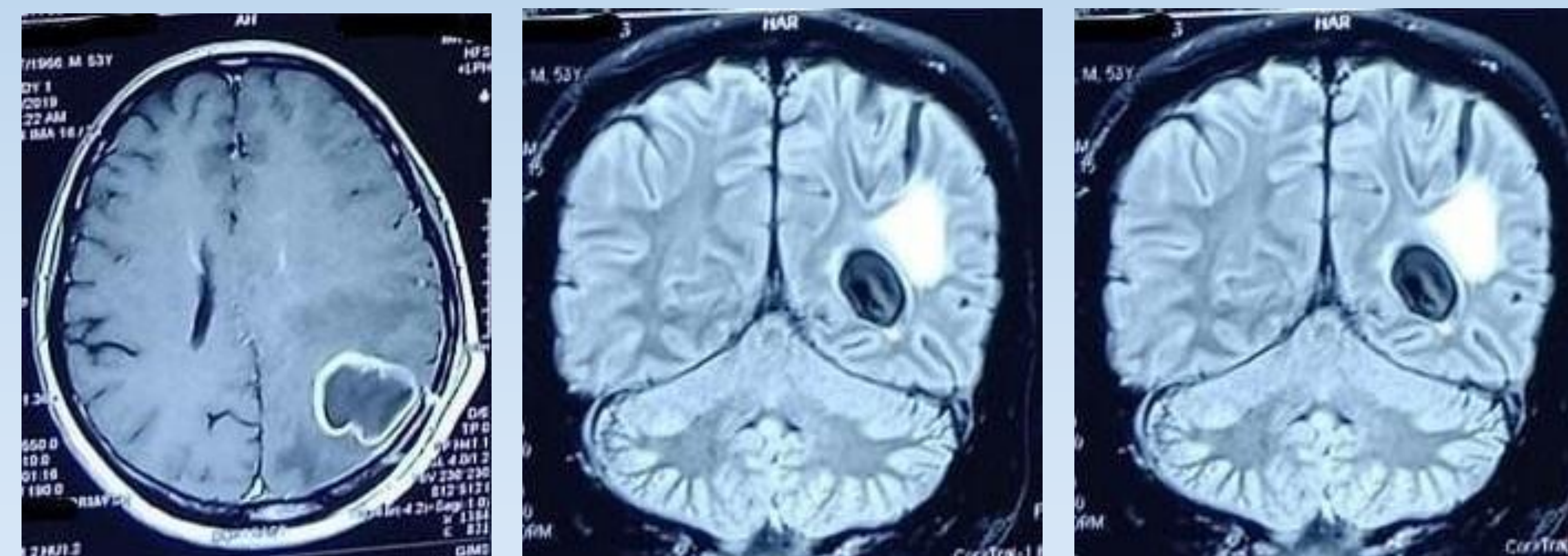
Two weeks later, the symptoms persisted, and at repeat imaging showed a residual pain abscess.

A re-evacuation of the abscess was done, and voriconazole was continued.

Patient's symptoms resolved Post evacuation on day 24 of hospital stay.

He received 1 year of oral voriconazole.

The neurological outcome was excellent at 1 year follow-up, with no residual neurological deficit.



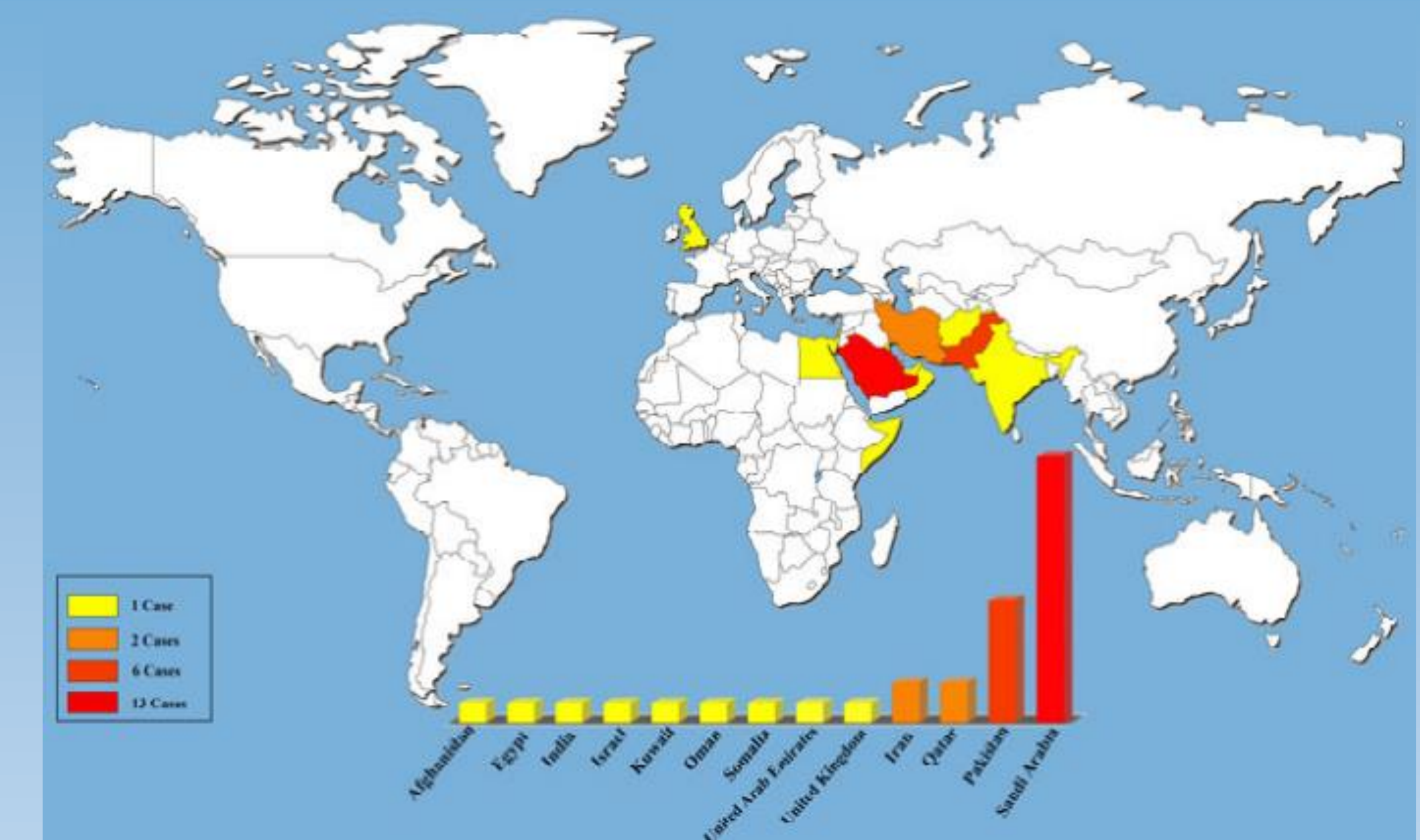
MRI Brain: single ring-enhancing parieto-occipital lesion on the T1 weighted image. With hyperintensity on T2 image.

DISCUSSION

Rhinoctadiella mackenziei infections can have varying clinical presentation ranging from respiratory infections to deadly brain abscess and septic shock. Immunodeficiency states like solid organ transplantation, chronic liver disease, connective tissue disorders, and chronic steroid use predispose to cerebral phaeohyphomycosis.

Commonly used antifungal drugs voriconazole, amphotericin B, itraconazole, and Posaconazole.

Early diagnosis and aggressive surgical treatment is associated with prolonged antifungal coverage can lead to favorable outcome.



Distribution and the number of reported cases of cerebral phaeohyphomycosis due to *Rhinoctadiella mackenziei*.
Mohammed R. et al.

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