



SPECIES OF CURVULARIA PROVING ITS CLINICAL SIGNIFICANCE IN IMMUNOCOMPROMISED PATIENTS- CASE REPORTS

Microbiology

Dr Harshita*	Consultant Microbiologist And ICO, KG Hospital And Post Grad Teaching Institute , Coimbatore 641018 *Corresponding Author
Dr. Shakthi Selva Kumar	Final Year Dnb Resident, Department Of NEPHROLOGY, KG Hospital And Post Graduate Teaching Institute, Coimbatore -641018
Dr Jessica Kaushal	MBBS interns, GMC, Amritsar
Dr Abhimanyu Rakesh	MBBS interns, SGRD, Amritsar

ABSTRACT

INTRODUCTION: Dematiaceous fungi are the causative agent of phaeohyphomycosis and are progressively identified as human pathogen. These fungi contain melanin in their cell wall which makes them highly virulent and simultaneously gives dark colour to their hyphae and spores. One of the important members of this melanised fungi is *Curvularia* containing 80 species most of which are found in soil and plant. Being a contaminant, it is also isolated in various clinical specimens. It is known to cause skin and soft tissue infections, mycetoma, onychomycosis, keratitis, allergic sinusitis, pneumoniae, dialysis associated peritonitis and disseminated infections. It has recently emerged also as an opportunistic pathogen in immunocompromised persons.

KEYWORDS

curvularia & immunocompromised state

Here are we presenting two reports of the same infection: case report 1:

42 year old male a known case of end stage renal disease (ESRD) patient on continuous ambulatory peritoneal dialysis (CAPD) (2.5% three exchanges /day) admitted with chief complaints of abdominal pain, fever with chills and rigors for 2 months duration along with dyspnoea. CAPD peritonitis was suspected.

On gross examination, CAPD fluid was turbid with some black flecks in it and the skin around the catheter had black discoloration. The clinician suspected fungal infection and sent the sample (CAPD FLUID) for further microbiological analysis.

On Microbiological examination :

KOH mount (10% KOH) showed branching septate hyaline hyphae with some circular to oval structures of twisted morphology.

Inoculation of the specimen on SDA (Sabouraud's dextrose agar) media showed fast growing colony, fully matured within 5 days, suede-like, greenish grey at the centre, effuse and grayish white towards the periphery, reverse brownish black. The color of the medium remains yellow.

Lactophenol cotton blue stain showed branched septate, hyaline to brown hyphae, large pale brown macroconidia with no more than four transverse septa, the subterminal cell curved, swollen, larger and darker than the remaining, characteristic of *Curvularia* species were seen.

This patient was further managed with fluconazole 400 mg once daily during his hospital stay and voriconazole 200 mg twice daily for 21 days along with Amphotericin-B 50 mg I.V on discharge.

Case report 2:

Second case was a 44 years old female patient came with chief complaint of fever, ulcer and swelling on right leg since 2 days and blister on dorsum of foot since 1 day.

On gross examination there was severe edema with pus discharge and dark discoloration of left toe and surrounding skin of the wound.

Under local anaesthesia faciotomy incision made on dorsum of foot and toxic fluid drained out and sent for bacterial and fungal culture/sensitivity.

On Microscopic Examination :

KOH mount (10% KOH) showed numerous hyphae and round to oval

structures with distorted morphology.

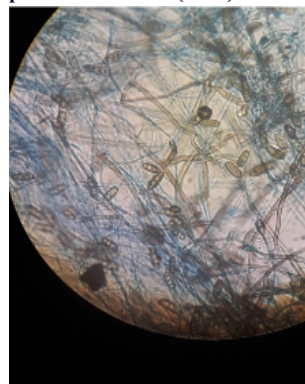
Lactophenol cotton blue stain also showed various branched hyphal structures with numerous 4 celled distoseptate straight, rounded at the ends, pale brown to mid brown, ellipsoidal or oblong conidia seen which was also characteristic of *Curvularia*.

Patient was further managed with fluconazole 400 mg during hospital stay and surgically wound debridement with 5th toe amputation was done to preserve the rest of the foot.

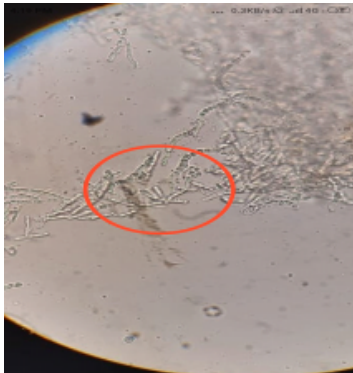
DISCUSSION :

Melanized fungi are typically the soil organisms and common laboratory contaminants but sometimes they are overlooked as nonpathogenic. Recently they are being increasingly perceived as an important pathogen in immunocompromised host in a wide variety of clinical syndromes and thus making the diagnostics a daunting task. So their isolation in these patients should always be considered with careful clinical suspicion and microbiological reports. Due to limited data available, the prevalence of *Curvularia* infection is unknown. Our both cases were immunocompromised by diabetes and kidney damage respectively. Therefore the isolation of this organism with remarkably low data available makes it more worrisome to decide the treatment and prognosis. Irrespective of the strain, management of such mould infections significantly increased survival. Our both cases received antifungals and both have shown significant improvement.

Pictures of lactophenol cotton blue (LCB) and KOH mount :



lactophenol cotton blue stain showing 4-5 distoseptate round to oval conidia.

**KOH mount****Self assessment questions :**

Q1. Which of the species of curvularia is not distoseptate?

- c. lunata
- c. australiensis
- c.hawaiiensis
- c. boedijn

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