ISSN 2320 7159

INERNATIONAL JOURNAL OF MEDICAL RESEARCH

CASE REPORT

Localized Fusariosis Caused by Fusarium Verticillioides – A Case Report

Mangaiyarkarasi Thiyagarajan[1*], Saranya. D[1], Gopal R[1]

[1]Department Of Microbiology, Sri Manakula Vinayagar Medical College & Hospital, Puducheery, India

ARTICLE INFO

doi: 10.5455/ijmr.20160724120220

Keywords:
Fusariosis,
Fusarium verticillioides

*** Corresponding author**:
Mangaiyarkarasi Thiyagarajan
Department Of Microbiology, Sri Manakula Vinayagar Medical College & Hospital, Puducheery, India
Email: drtmangai76@yahoo.in
Mobile: 91 9442485276

ABSTRACT

The genus Fusarium contains several species which are saprophytic moulds present in the soil and air. They can cause local cutaneous infections and infections of surgical & burns wounds as well as disseminated infection. It has emerged as an important pathogen in immuno-compromised patients causing significant morbidity and mortality. The species most frequently associated with human infections are F. Solani, F. Oxysporum, F. Verticillioides. This case of a fusariosis presented as lupus vulgaris caused by Fusarium verticillioides in a male patient who is also infected with mycobacterium.

INTRODUCTION

The genus Fusarium contains several species which are saprophytic moulds present in the soil and air. They can cause local cutaneous infections and infections of surgical & burns wounds as well as disseminated infection.[1] It has emerged as an important pathogen in immuno-compromised patients causing significant morbidity and mortality. The species most frequently associated with human infections are *F.solani, F.oxysporum, F.verticillioides.*[2]

We report a case of fusariosis presented as lupus vulgaris caused by *Fusarium verticillioides* in a male patient who is also infected with mycobacterium.

CASE REPORT

A 55 year old male came to the dermatology OPD presenting with multiple nodular skin lesions for past 6 months. Patient did not recall any previous injury. On examination his vitals were stable. He was clinically diagnosed as Lupus vulgaris and was investigated for the same. Mantoux test was positive showing induration of 40mm in size. Full blood count done which was normal. HIV testing – not done. Tissue biopsy was done and small bit of tissue received in Microbiology laboratory for bacterial and fungal evaluation.

INVESTIGATIONS

Direct KOH mount showed branched septate hyphae. Direct Grams smear showed gram positive septate hyphae with spores. No bacterial pathogens were seen (Figure 1). Direct Z-N smear: Showed long slender acid fast bacilli. HP –smear showed epithelioid cell granuloma and langhan's type giant cell (Figure 2).

The sample was inoculated in Blood agar, MaConkey agar, Sabourad dextrose agar, Middlebrook's agar for bacterial and fungal isolation. No bacterial growth was seen after 48 hrs. No acid fast bacteria were isolated even after 8 weeks incubation. Culture on SDA showed characteristic abundant pinkish white aerial mycelia and pale pink pigment on the reverse. (Figure 3,4)

Microscopy of fungal growth by LPCB mount showed hyaline septate hyphae with sessile, entirely monophilidic conidiophores producing microconidia in long chains. Microconidia were 6 to 10 µm long by 2.5 to 3.5µm wide and were mostly aseptate or rarely had one or two septa. They were clavate, cylindrical or slightly curved in shape with a tapered, truncate base. Neither macroconidia nor chlamydospores were observed. (Figure 5)

By macroscopic and microscopic morphology the fungus was identified as *Fusarium verticillioides.*

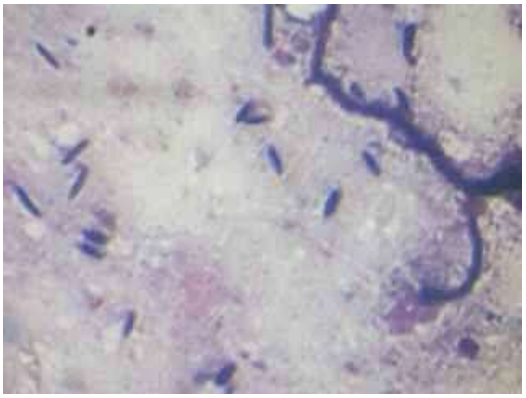

Fig 1: Direct Grams smear

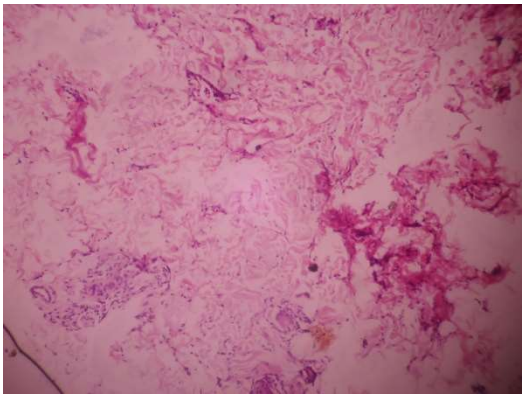

Fig 2: HP –smear

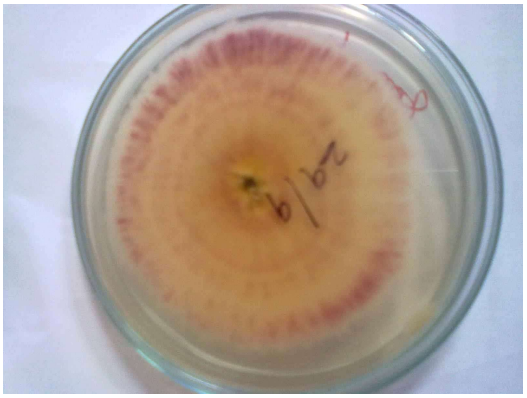

Fig 3: Culture on SDA

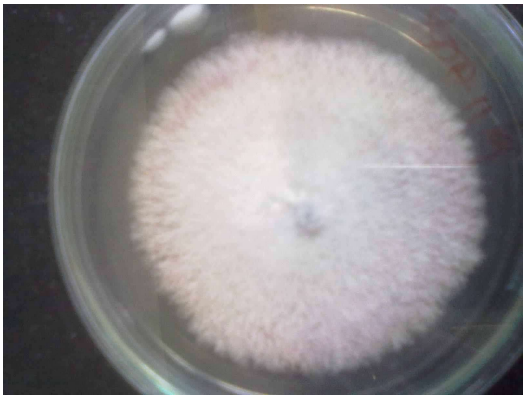

Fig 4: Culture on SDA

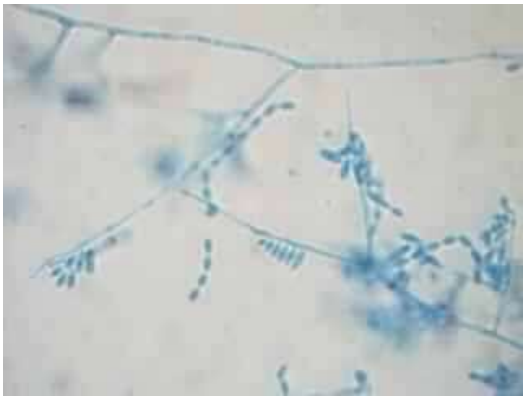

Fig 5: Microscopy of fungal growth by LPCB mount

DISCUSSION

Fusarium species are common plant pathogens or saprophytes on decaying plant material. In immunocompetent individuals they cause local infections out of which post traumatic keratitis is most common. The rate of infection by this fungus is more common in immunocompromised individuals leading to disseminated infections.[3]

In our case patient presented with multiple nodular cutaneous lesions with erythema associated with Lu-

pus vulgaris caused by mycobacterium. Based on clinical findings, mantoux test and laboratory findings he was started on antitubercular therapy, before starting on antifungals – liposomal amphotericin B (LAMB) he was lost for follow-up.

Fusarium species are emerging fungal pathogens causing increased morbidity and mortality in patients with malignancies and recipients of bone marrow transplantation out of which *F. verticillioides* is the most common species. Invasive fusariosis can be life threatening and treatment options are very limited. Careful diagnosis and aggressive treatment play a vital role in the outcome of these infections.

REFERENCES:

1. Fleming, R.V., T.J.Walsh, and E.J.Anaissie. Emerging and less common fungal pathogens. Dis Clin North Am 202; 16:915-933
2. Gupta,A.K., R.Baran, and R.C.Summerbell. Fusarium infections of the skin. Curr Opin Infect Dis 2000; 13:121-128
3. Nucci, M.,and E.Annassie. Cutaneous infection by Fusarium species in healthy and immunocompromised hosts: implications for diagnosis and management. Clin Infect Dis 2002; 35: 909-920