Int.J.Curr.Microbiol.App.Sci (2016) *5*(9): 574-578

International Journal of Current Microbiology and Applied Sciences
ISSN: 2319-7706 **Volume 5 Number 9 (2016) pp. 574-578**
Journal homepage: http://www.ijcmas.com

Case Study

http://dx.doi.org/10.20546/ijcmas.2016.509.064

Subcutaneous Scedosporiosis in a Diabetic

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Keywords

Scedosporium apiospermum, Anamorph, *Pseudallescheria boydii*, Immunocompromised.

Article Info

Accepted:
20 August 2016
Available Online:
10 September 2016

A B S T R A C T

Scedosporium apiospermum, the anamorphic form of *Pseudallescheria boydii*, is a filamentous fungus present ubiquitously inhabiting water and soil (Jene-Kuen *et al*., 1995). It is now recognized as a medically important opportunistic fungus. Pus sample aspirated from a painless, fluctuant swelling over the anterior aspect of right forearm of a 60 year old diabetic female was processed to identify the causative agent. KOH mount revealed the presence of septate branching hyphae. Sabouraud's Dextrose Agar with gentamicin showed white to mousy gray, cottony fluffy white mycelium. Lactophenol cotton blue mount from slide culture was positive for *Scedosporium apiospermum. S.apiospermum*has drawn the attention of clinicians and microbiologists, as an emerging opportunistic pathogen in the immunocompromised patients. Microbiological diagnosis of *Scedosporium* species currently depends upon the culture and morphological characterization.

Introduction

Hyalohyphomycosis is a fungal infection caused bynon-dematiaceous hyaline molds. At present, 74 species belonging to 20 genera are included under hyalohyphomycosis. Important human pathogens of this group include *Pseudallescheria, Fusarium* and *Penicillium*. Those causing opportunistic infections include *Acremonium*, *Geotrichium and Chrysosporium* species (Jagdish Chander Textbook of Medical Mycology, 2012).

Scedosporium apiospermum, the anamorphic form of *Pseudallescheria boydii*, is a filamentous fungus present ubiquitously in nature inhabiting soil and Water (Jene-Kuen *et al*., 1995). It is now recognized as a medically important opportunistic fungus (Jene-Kuen *et al*., 1995; Luiz Carlos *et al*., 1997; Jagdish Chander Textbook of Medical Mycology, 2012). Scedosporiosis represents a broad spectrum of clinical diseases caused by the members of the genus *Scedosporium*. The wide spectrum of diseases caused by *Scedosporium* include skin and soft tissue infections, septic arthritis, osteomyelitis, endocarditis, peritonitis, meningitis, brain abscess, parotitis, thyroid abscess, otomycosis, sinusitis, keratitis and endophthalmitis particularly in the immunocompromised (Jene-Kuen *et al*., 1995; Luiz Carlos *et al*., 1997; Jagdish

Chander Textbook of Medical Mycology, 2012).

Case History

A 60 yr old female, a known diabetic since twelve years, attended the dermatology out-patient department with a painless swelling over the anterior aspect of right forearm of eleven months duration. The lesion was initially small in size and gradually increased to the present size of 6 cm x 5 cm x 3cm.The swelling was soft, non-tender and fluctuant with restricted mobility (Figure 1).

Fine Needle Aspiration Cytology (FNAC) report revealed the presence of inflammatory cells against a necrotic background with foci of septate fungal hyphae with branching. X-ray forearm, both antero-posteior and lateral views, showed soft tissue swelling with no evidence of bony involvement (Figure 2).

Fig.1 Swelling over the anterior aspect of right forearm

Fig.2 X-ray forearm showing soft tissue swelling with no evidence of bony involvement

Fig.3 KOH mount showing branching, septate hyphae

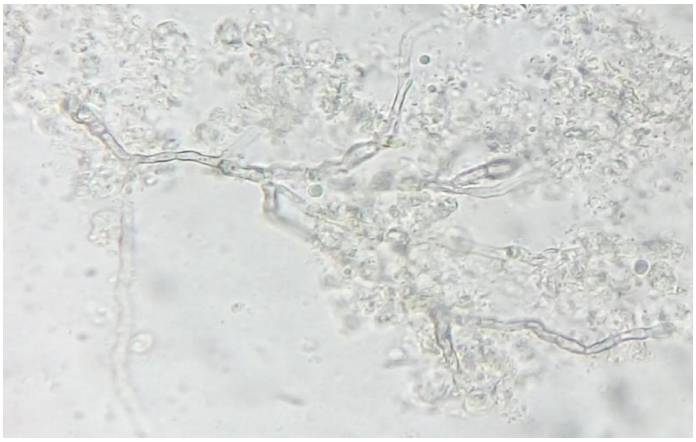


Fig.4 Sabouraud's Dextrose Agar showing white to mousy gray, cottony fluffy white mycelium

Fig.5 Slide culture

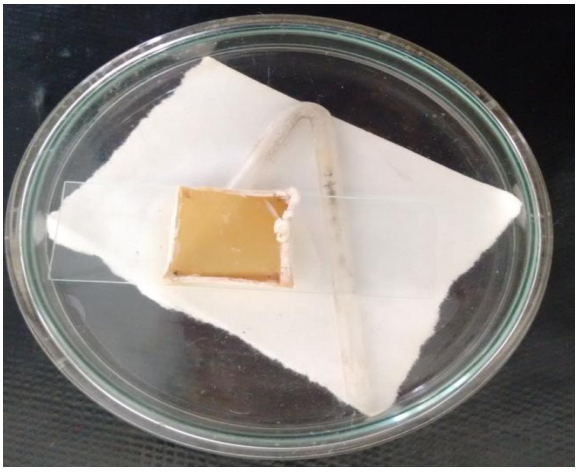
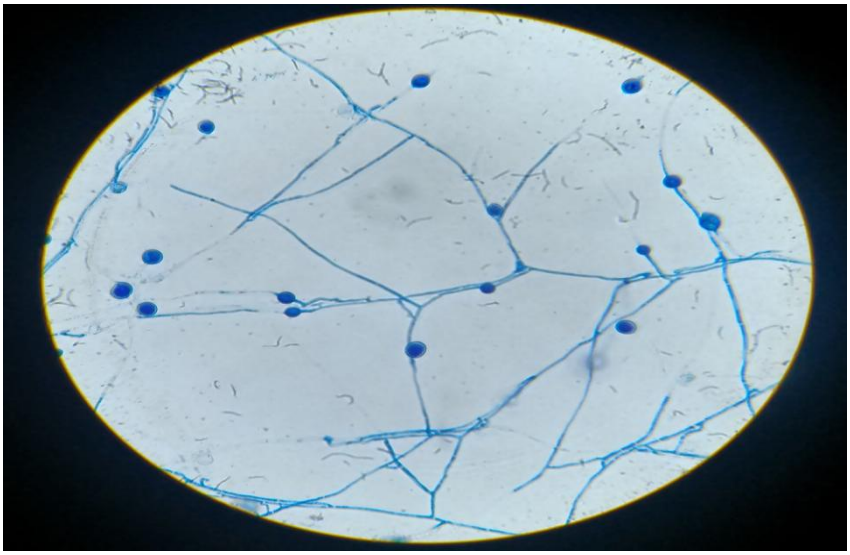


Fig.6 LPCB mount from slide culture showing hyaline septate hyphae with conidiophores each bearing single elliptical, sperm-shaped conidia on their tips, simulating so called "lollipopos" – suggestive of *Scedosporium apiospermum*



Under strict aseptic conditions, pus was aspirated from the most fluctuant part of the swelling and KOH mount was done. It showed the presence of branching, septate hyphae (Figure 3).

The pus sample was then inoculated on Sabouraud's Dextrose Agar (SDA) with gentamicin and was incubated at 25°C. After three weeks of incubation, SDA showed white to mousy gray, cottony fluffy white mycelium (Figure 4). Slide culture was done and was incubated at 25°C in a Biological Oxygen Demand (BOD) incubator (Figure 5).

Lacto Phenol Cotton Blue (LPCB) mount was done from the slide culture. Hyaline septate hyphae that produced conidiophores each bearing single elliptical, sperm-shaped conidia on their tips, simulating so called "lollipopos" were observed. Based on the colony morphology and characteristics of the conidia on LPCB mount, the isolate was identified as *Scedosporium apiospermum*, the asexual stage of *Pseudallescheria boydii* (Figure 6).

In my case report, the causative agent was identified as *Scedosporium apiospermum.* Similar cases of subcutaneous hyalohyphomycoses caused by *Scedosporium apiospermum* have been reported by Severo *et al*., (1997) in a female patient suffering from carcinoma breast; by Travis *et al*., (1985) and Vijaya *et al*., (2013) in chronic diabetics. Wang, *et al*., (1995) reported a similar case in a diabetic and alcoholic male patient.

In conclusion, *Scedosporium apiospermum* is an emerging opportunistic pathogen among the ever-increasing immune-compromised patient population. Early identification of the fungus and institution of proper antifungal therapy depending on clinical response can be helpful in the treatment of infections due to *S. apiospermum*. This case has been reported for its rarity.

References

Jagdish Chander Textbook of Medical Mycology. 2012. 3rd edition, Mehta

Publishers, 421-425.

Jene-Kuen Wang, M., Ming-Long Hsu and J., Yu-Yun Lee. 1995. A Non-Mycetomatous Pseudallescheria boydii Skin Infection in An Immuno-compromised Man – A Case Report. *DermatolSinica*, 13: 93-102.

Luiz Carlos, S., Evero, Flávio de Mattos Oliveira, Alberto Thomaz, Londero. 1997. Subcutaneous Scedosporiosis. Report of two cases and review of literature. *Rev. Inst. Med. trop. S. Paulo*, 39(4).

Travis, L.B., Roberts, G.D. and Wilson, W.R. 1985. Clinical significance of *Pseudalescheria boydii*: a review of 10 years' experience. *Mayo Clin. Proc*., 60: 531-537.

Vijaya, D., Nagaratnamma, T. and Sathish, J.V. 2013. Diabetic Foot Ulcer due to *Scedosporium apiospermum*. *J. Clin. Diag. Res.*, 11: 2579 – 2580.

How to cite this article:

Venkata Hemalatha Neeli, Perala Bala Murali Krishna and N. Lakshmi. 2016. Subcutaneous Scedosporiosis in a Diabetic. *Int.J.Curr.Microbiol.App.Sci.* 5(9): 574-578.
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