



**ORIGINAL RESEARCH PAPER**

**Dermatology**

**RARE CUTANEOUS FUNGAL INFECTION IN RENAL TRANSPLANT RECIPIENT**

**KEY WORDS:** Renal transplant recipients, *Scedosporium prolificans*, Invasive fungal infections.

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**ABSTRACT** Renal transplant recipients are susceptible to various infections due to the high level of immunosuppression required to prevent rejection. Invasive fungal infections are a significant complication in these patients mainly due to *Candida* and *Aspergillus* spp. The trends in the incidence of *Scedosporiosis* in transplant recipients are less well delineated. *Scedosporium prolificans* is an emerging opportunistic fungal pathogen causing life-threatening infections in immunocompromised patients.

**BACKGROUND -**

Fungal infections are common in transplant patients due to long term immunosuppressive therapy<sup>1</sup>. Five percent of all infections in renal transplant recipients are fungal in origin. The risk of infection is determined by balanced relationship between epidemiological exposure and state of immunosuppression. *Scedosporiosis* is a major invasive fungal infection leading to nodules and secondary ulceration on the skin along with systemic involvement leading to abscess formation in viscera. *Scedosporium apiospermum* and *Scedosporium prolificans* are two clinically significant species of the genus *Scedosporium*. Herein we report a case report of an unusual invasive fungal infection by *Scedosporium* species in renal transplant recipients.

**CASE REPORT -**

A 36 year old male, a diagnosed case chronic glomerulonephritis was on MHD for 6 months and underwent renal transplantation , donor being sister. He was on triple immunosuppressive regimen, which included tacrolimus 3 mg/day, mycophenolate mofetil 1g/day and prednisolone 10mg/day. After 6 months he presented to us with complaints of asymptomatic nodule associated with crusting and ulceration over the left leg On examination, a solitary well defined erythematous nodule of size 3x2cm over the lateral aspect of left ankle with scaling and surrounding hyperpigmentation was present (figure 1). Differential diagnoses considered were Tuberculosis verrucosa cutis and deep fungal infection.

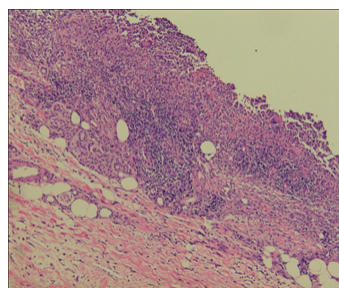
On investigation, routine blood tests revealed no abnormality. Renal functional tests were in abnormal parameters with serum creatinine levels elevated to 2.9mg/dl and serum urea levels 46mg/dl. Histopathology showed hyperkeratotic epidermis with ulceration, and dermis revealed focal granulomatous inflammation surrounding necrotic zones along with neutrophilic and lymphocytic infiltration. Numerous fungal hyphae were present in the inflammatory infiltrate (figure 2). Excisional biopsy of the tissue from the lesion showed the growth of *Scedosporium* species on fungal culture (figure 3).

The patient was started on intravenous liposomal amphotericin B 150mg/day for two months, and the lesion gradually resolved (figure 4).

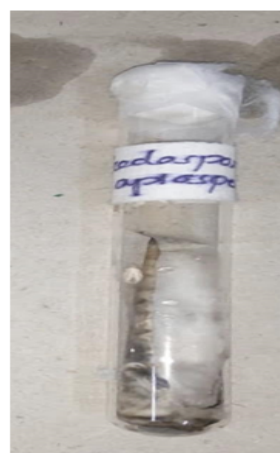
**Figure 1 :**



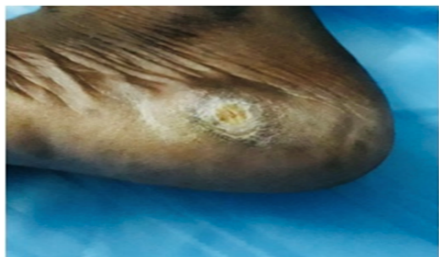
**Figure 2:**



**Figure 3:**



**Figure 4:**



**DISCUSSION -**

Renal transplant recipients are susceptible to various infections due to high level of immunosuppression required to prevent rejection. Invasive fungal infections are the major cause of mortality and morbidity in these patients. *Scedosporium* species are the surging cause for deep fungal infections.

Kingdom:Fungi  
 Phylum:Ascomycota  
 Class:Eusascomycetes  
 Order:Microascales  
 Family:Microasceae  
 Genus:Scedosporium

*Scedosporium* fungus is ubiquitous in the environment, found in the soil and polluted water<sup>2</sup>. Human infection often results from inhalation of the spores or through direct inoculation, as in a skin puncture. A high incidence of disseminated disease and high mortality rates is found in hematopoietic cell and solid organ transplant recipients<sup>3,4</sup>. The outcome depends on the location mainly location of infection, choice of antifungal therapy, feasibility of surgical debridement, and the underlying immune status of the patient. Clinical manifestations vary from localised infection to severe disseminated disease in severely immunocompromised hosts .Culture is the gold standard for both detection and antibiotic susceptibility testing. The antifungal agent with the greatest efficacy against *Scedosporium* species is oral voriconazole 200mg twice daily. Intravenous liposomal Amphotericin B and intravenous voriconazole are preferred in systemic involvement<sup>5</sup>.

**CONCLUSION**

Prompt and early diagnosis along with standardization of treatment of fungal infections in transplant recipients, is essential for better outcome. The antifungal treatment should be tailored according to the in-vitro susceptibility tests and immunosuppressive therapy has to be reduced when feasible.

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