



SUBCUTANEOUS PHAEOPHYCOMYCOSIS CAUSED BY *ALTERNARIA ALTERNA* IN A DIABETIC PATIENT: A CASE REPORT

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<p>Article Info Received 05/05/2015 Revised 10/05/2015 Accepted 16/05/2015</p> <p>Key words: <i>Alternaria</i>, Pheohyphomycosis, Fluconazole.</p>	<p>ABSTRACT Cutaneous site is the most frequent involvement in <i>Alternaria</i> infection. We report a case of subcutaneous pheohyphomycosis in a female diabetic patient. She was treated with fluconazole following major debridement with marked improvement on follow up.</p>
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INTRODUCTION

Phaeohyphomycoses are opportunistic infections caused by melanized (dematiaceous) moulds. *Alternaria* is a dematiaceous hyphomycete that is frequently involved in human infection, especially in immunocompromized patients. Cutaneous and subcutaneous infections are most common manifestations (74.3%) [1]. We report a case of subcutaneous pheohyphomycosis due to *Alternaria* species in a diabetic patient.

Case Report

A 68year old female patient presented to our diabetic foot clinic with sever weakness and right leg pain with a nonhealing ulcer on the right inguinal region for 15days. She was a known diabetic for last 12 years and was on novorapid and hypertensive for last 6years on anti hypertensives. She had under gone below knee amputation of the left side 8 months back. On admission she was afebrile, with severe pallor and pedal edema, no clubbing or cyanosis. Her pulse rate was 84/minute, blood pressure 140/90 mm of Hg, respiratory rate 28/minute. On local examination, the right inguinal region was soft swollen tender with a nonhealing ulcer with a crust in the centre.

Her haemoglobin was very low, 4.8g/dl. She was given blood transfusion for correcting anemia later. Total WBC count was raised, 39000, with 94% neutrophils. Her platelet count was also high. Creatinine was high, 2.2. Major debridement was done and the tissue sample was sent to the Microbiology laboratory without delay for bacterial and fungal culture and sensitivity. Direct microscopy with 10% KOH showed fungal hyphae. The tissue was ground with a sterile mortar and pestle and cultured on 5%sheep blood agar, MacConkey agar and Sabouraud's dextrose agar at room temperature and 37°C. There was no bacterial growth however brownish black colonies grew on SDA at room temperature within 4 days. Reverse was black [Figure 1(a), 1(b)].Slide culture was done. On lacto phenol cotton blue staining, characteristic large brown club shaped conidia with both transverse and longitudinal septations either found singly or in chains were seen [Figure no.2].The mold was identified as *Alternaria alterna* by conventional identification technique. On further enquiry the patient gave a history of trauma to the leg. The patient was treated with oral fluconazole with complete resolution on follow up after a month.



Fig 1. Brownish black colonies of *Alternaria alternata* on SDA, (b) Reverse Black

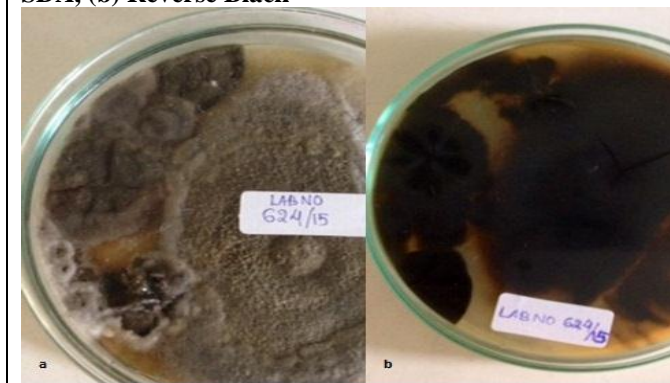
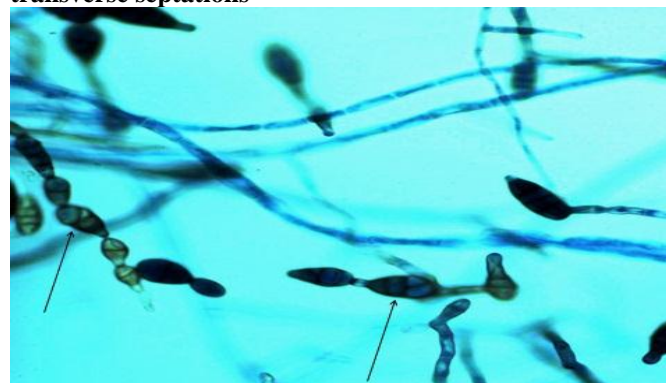


Fig 2. Club shaped conidia with longitudinal and transverse septations



DISCUSSION AND CONCLUSION

A number of fungi have been associated with phaeohyphomycosis. *Alternaria* species is one of them, a ubiquitous dematiaceous fungus associated with infections mostly in immunocompromised patients. Alternariosis presents with a varied range of clinical spectrum and includes the following: Hypersensitivity pneumonitis, granulomatous lung disease, bronchial asthma, paranasal sinusitis with and without osteomyelitis, allergic sinusitis and rhinitis, keratitis, peritonitis and cutaneous and subcutaneous deep-tissue infection [1]. Majority of cases are reported in organ transplant recipients [1, 2]. Steroids and immunosuppressive therapy are also few of the other predispositions for infection with *Alternaria* spp [3,4]. Apart from transplant patients it has been reported rarely in Diabetes mellitus. Lyke *et al.* described cutaneous ulcerative lesion in a diabetic patient without steroid therapy who responded poorly to Itraconazole therapy [5]. Osteomyelitis of maxilla due to *Alternaria alternata* was reported by Chhabra *et al.* in a diabetic patient [6]. The

portal of entry of the infection is usually through trauma or breakdown of the skin barrier as in our case [1]

There is no particular recommendation for treatment of *Alternaria* infections. Variable patient outcomes have been reported with itraconazole, the most frequently used antifungal, voriconazole and amphotericin B [5]. However our patient was treated with oral fluconazole following a major debridement with favourable outcome after a month of follow up. Favourable results were achieved with fluconazole therapy in a patient with long standing massive *Alternaria alternata* infection [7]. In another study cutaneous alternariosis in an immunocompetent patient was successfully treated with oral fluconazole therapy [8]. In many patients with cutaneous alternariosis treatment failures with relapse even after 2 years of complete resolution has been reported [9], so prolonged duration of follow up is required in our patient to monitor recurrence of infection. To best of our knowledge our case is probably the third case of alternariosis in a diabetic who was not on steroid therapy.

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