

Subcutaneous phaeohyphomycosis of the scalp - a rare fungal infection treated by excision

V. Arunagiri

Department of General Surgery, Government Medical College, Thiruvannamalai, Tamilnadu, India

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Introduction

Fungal infections are known to occur in immune-compromised individuals. Most are treated by antifungal chemotherapeutic agents either by local measures or by systemic treatment. Phaeohyphomycosis, derived from the Greek language meaning dark fungi with hyphae, is a rare condition. We describe what we believe is the first ever case report of phaeohyphomycosis in the occipital region of the scalp which mimicked a dermoid cyst.

Case report

A 23 year old male presented with a 3 year history of a painless scalp swelling in the occipital region. He had had a history of trivial head trauma. He did not suffer from medical illnesses and had no previous surgical procedures. The swelling was 3 cm in diameter and situated over the midline of the occipital region, just above the occipital protuberance. It was soft, cystic in consistency and had a smooth surface. The lump was in the subcutaneous plane, mobile and was not transilluminant. There was no cough impulse or bony indentation. The provisional diagnosis was dermoid cyst of the scalp. Fine needle aspiration cytology assessment was undertaken and reported as an epidermoid cyst. A computed tomography image of the skull was taken which revealed a hypodense soft tissue swelling over the occipital region of the scalp, probably dermoid cyst (Figure 1). Under local anesthesia, the swelling was excised completely and sent for

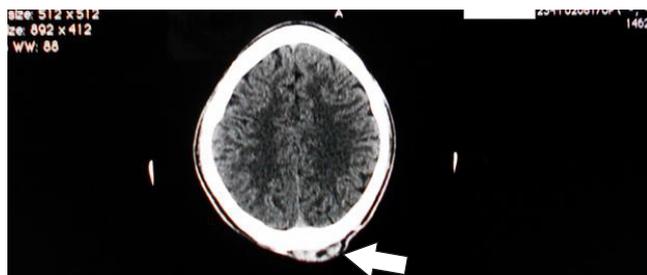


Figure 1. Computerised tomogram of the brain showing a hypodense lesion in the subcutaneous plane of the occipital region (arrow) - this is subcutaneous phaeohyphomycosis mimicking a dermoid cyst

histopathological examination.

The histopathological examination report was a fibrocollagenous tissue with clusters of pigmented fungal hyphae infiltrating into the fibrocollagenous tissue, suggestive of a subcutaneous phaeohyphomycosis (Figure 2). We were not able to find the causative species as the specimen was fixed in formalin after excision.

Discussion

In 1983, McGinnis introduced the concept of phaeohyphomycosis [1]. “Phaeo” is a Greek word which means “dark” and “hypho” stands for “fungi with hyphae” [2]. Phaeohyphomycosis is a fungal infection caused by dematiaceous fungi or melanised fungi, since group of fungi has melanin in their cell wall. *Wangiella dermatitidis*, *alternaria*, *curvularia*, *cladophialophora* and *expholia jeanselmei* are the common species causing phaeohyphomycosis.

Phaeohyphomycosis is a rare disease. In 2002, Sharma et al. reported 23 cases of subcutaneous phaeohyphomycosis in India [3]. In Malawi, O Donnell PJ et al. reported nine cases of subcutaneous phaeohyphomycosis in extremities [4]. In Brazil,

Correspondence: V. Arunagiri
E-mail: surgeonvarun@yahoo.com

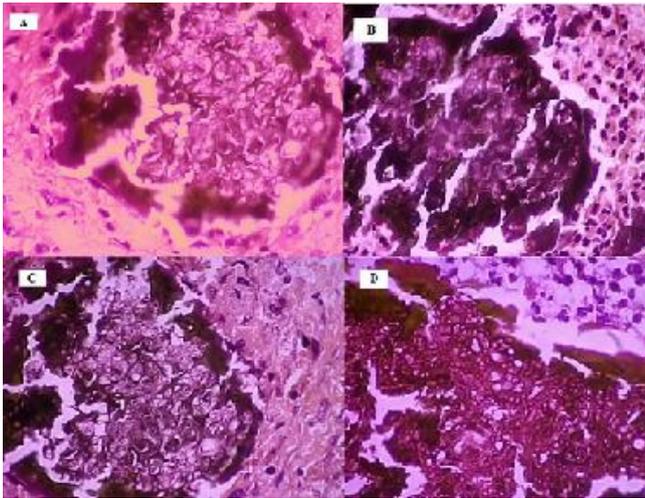


Figure 2. Subcutaneous phaeohyphomycosis - dematiaceous mold under low power light microscopy (A). B,C,D are high power light microscope images of the characteristic brown pigmented hyphae (B) and neutrophils (C) . D shows fungus stained with per-iodic acid Schiff diastase stain.

Cecília Bittencourt Severo et al. reported 18 cases of subcutaneous phaeohyphomycosis in which most of the cases were in transplant patients in the extremities and in the vital organs such as the lungs and brain [5]. Subcutaneous phaeohyphomycosis is more common in the extremities, buttocks and rarely the scalp. A pubmed search for case reports on subcutaneous phaeohyphomycosis of extremities provided 39 search results, while there were no results for subcutaneous phaeohyphomycosis of the scalp as of up to July 2014.

So this is the first case report of subcutaneous phaeohyphomycosis of the scalp in a 23 year old male.

The clinical presentation of subcutaneous phaeohyphomycosis is a painless swelling, which is cystic to firm in consistency in the subcutaneous plane and is common in immunocompromised patients. Usually the diagnosis is made after excision with the histopathological examination as in this case. Treatment is by surgical excision. Itraconazole in the post-operative period has shown promising results in the treatment of subcutaneous phaeohyphomycosis both in immuno-compromised and normal patients

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Key Points:

- ☞ Phaeohyphomycosis is a rare fungal infection which presents as a painless swelling
- ☞ This condition occurs commonly in individuals who are immunocompromised.
- ☞ Dermoid cyst is a differential diagnosis.
- ☞ Treatment is by surgical excision and treatment with itraconazole.