CHAPTER 6

SUBCUTANEOUS MYCOSES

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INTRODUCTION

Subcutaneous mycoses is a group of heterogenous fungal diseases including implantation sporotrichosis, chromoblastomycosis (CBM), phaeohyphomycosis (PHM), entomophthoromycosis, mycetoma (eumycetoma), lacaziosis (lobomycosis), hyalohyphomycosis and rhinosporidiosis. Subcutaneous mycoses are typical inoculation related fungal infections caused by mainly dematiaceous fungi. World Health Organization (WHO) described neglected tropical diseases (NTDs) including mycetoma. However, some authors noticed that, CBM is also an neglected disease and its global burden is comparable to than that of mycetoma (1,2,3).

Table 6.1. *Subcutaneous mycoses*

Disease	Agent
Sporotrichosis	*Sporothrix schenckii*
Chromoblastomycosis (CBM)	*Cladophialophora* *Fonsecaea* *Phialophora* *Exophiala* *Other dematiaceous fungi*
Mycetoma (eumycetoma)	*Phaeoacremonium* *Fusarium* *Aspergillus nidulans* *Scedosporium apiospermum* *Madurella* *Exophiala jeanselmei*

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Surgical resection alone is not effective in managing infections caused by *Basidiobolus* and *Conidiobolus* species. Cosmetic surgery can be proposed after prolonged antifungal therapy and sterilization of the lesion. Treatment is not well defined for entomophthoraceous fungi. The dosage, duration and even the best antifungal drug selection are unclear. Saturated potassium iodide (30 mg/kg/day) has been the treatment of choise (37,38).

6.8. Rhinosporidiosis

Rhinosporidiosis is a polypoid disease usually involving the nasal mucosa. The lesions begin as small papillomas and progress to pedunculated tumors. Bleeding is possible. The disease is seen in Ceylon and India, East Asia, in Latin America. Causative agent *Rhinosporidium seeberi* is an organism found in stagnant water (39,40).

The taxonomic, ecologic and epidemiologic features have been largerly misunderstood because *R. seeberi* can not be cultured in vitro. Molecular studies showed that *R. seeberi* is an eukaryotic microbe in the mesomycetozoa. Portal of entry is the skin, however pathogenesis is unclear. Painless obstructive polypoidal masses that easly bleed are located in eyes, nostrils, pharynx. Pedunculated polyps are common. *R. seeberi* can be diagnosed in histopathological sections. The endospores in the rhinosporidial tissue were approximately 10 µm spherical masses containing spherical bodies, located in mature sporangium. Sporangia with endoconidia are well stained by H&E staining method. Culture should be performed to exclude other etiologies. In vitro culture with *R. seeberi* has never been achieved (33).

Destruction of the involved area by excision or electrosurgery is the most common treatment method. Molecular techniques are of the significant advantages in the study of both the pathogen and the disease because *R. seeberi* cannot be cultured in vitro yet, and nor has been possible to establish experimental rhinosporidiosis (41,42). Antifungals have limited effect.

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