**Oesophageal Candidiasis in a HIV Infected Patient**

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**Abstract**

*Candida* species are the most common cause of oesophagitis. A 46 year old, HIV seropositive male presented with dysphagia, odynophagia and retrosternal pain. Diagnosis of oesophageal candidiasis was confirmed by barium study, endoscopy and biopsy culture. *Candida albicans* was isolated from the specimen and the patient was treated successfully with oral Ketoconazole 200 mg/day for three weeks.

**Introduction**

The gastrointestinal tract is a major target organ of *Candida* species in AIDS, the entire tract from mouth to anus can be affected. However oral and oesophageal candidiasis are common.¹ The incidence of oral and oesophageal candidiasis has increased with the advent of AIDS pandemic.² Oesophagitis can be completely asymptomatic or it can be symptomatic on oesophagoscopy where there are white mucosal plaques, notable in the distal third of the oesophagus.³

The first known Indian case of oesophageal candidiasis in AIDS was reported in 1999. As endoscopy is an invasive procedure, studies on oesophageal candidiasis as such are not much reported from India.³ Here we report a case of oesophageal candidiasis diagnosed by barium study, endoscopy and biopsy culture in an HIV seropositive patient.

**Case Report**

A 46 year old male patient presented with dysphagia, odynophagia and retrosternal pain since one month. On examination there were no lesions in mouth suggestive of oral candidiasis. There were no ulcers or white curdy patches on tongue. The patient was known to be HIV seropositive (tested with WHO strategy III). He was afebrile, pulse rate 80/min, BP of 120/80 mm Hg. No cyanosis, clubbing or lymphadenopathy was observed. The findings of cardiorespiratory system were within normal limits. On abdominal palpation no hepatic or splenic enlargement was observed. X-ray chest was normal. His Hb was 10 gm%, TLC 3000 cells/mm³, CD4 count was 400 cells/mm³. As there were no lesions in the oral cavity suggestive of oral candidiasis, barium meal examination was performed which showed oesophageal irregularity throughout the oesophagus (Fig. 1). Endoscopy was done which showed patchy white plaques, biopsy samples were collected for microbiological investigation. Gram stained smears showed pus cells, plenty of budding yeast cells along with pseudohyphae. The samples were inoculated in two tubes of Sabouraud’s dextrose agar (SDA) containing antibiotics. The tubes were incubated at 37°C in the incubator and observed for growth, everyday. Typical whitish yeasty colonies were observed on SDA after 24 hours. Lactophenol cotton blue preparation was made from the colonies which showed budding yeast cells. The isolate was identified by germ tube test and growth on cornmeal agar and sugar assimilation tests.⁴ The germ tube test was positive. The growth on cornmeal agar showed pseudohyphae with clusters of blastoconidia distributed at regular intervals giving typical appearance of “spider like” colonies (Fig. 2). The isolate was identified as *Candida albicans* as germ tube test was positive, typical growth on corn meal agar and sugar assimilation tests.

The patient was started with oral Ketoconazole 200 mg twice daily for three weeks to which the patient responded. Follow up was done after 3 weeks, 6 weeks and 2 months during which no recurrence
was observed at the end of 2 months.

Discussion

Candida species are by far the most common cause of oesophagitis and after the oropharynx, the oesophagus is the most common site of gastrointestinal candidiasis. Oropharyngeal and oesophageal candidiasis have been reported to occur as a manifestation of HIV infection. Oropharyngeal candidiasis probably occurs in all those with HIV disease at some point during the course of illness, a consequence of defective cell mediated immunity. The incidence of candidiasis increases with advancing immunodeficiency. Normally oesophageal candidiasis, an AIDS defining condition occurs only with advanced CD4 cell count reduction (< 100 cells/mm³). Oropharynx is the most common site of mucosal candidiasis but the infection can extend into the oesophagus. In our patient, in contrast, oesophageal candidiasis developed at high CD4 cell counts. There was no involvement of oropharynx, which is rare because in most cases of oesophageal candidiasis there is oral candidiasis also, which extends into the oesophagus. Although oesophagitis may arise as an extension of oropharyngeal candidiasis, in many reports the oesophagus was the only site involved with distal 2/3rd rather than upper 1/3rd. While in our case the mucosal irregularity was observed along the whole oesophageal wall.

Candida oesophagitis commonly causes dysphagia, odynophagia and retrosternal pain. In the absence of oropharyngeal candidiasis, if HIV seropositive patient presents with symptoms of oesophageal candidiasis as odynophagia, dysphagia and retrosternal pain, other causes as reflux oesophagitis, idiopathic ulcers, Cytomegalovirus infection and Herpes simplex virus infection should be ruled out. In such cases reliable diagnosis can be made only by
histologic evidence of tissue invasion in biopsy material. In the present case diagnosis of oesophageal candidiasis was confirmed by biopsy culture.

Candida albicans is reported to be the commonest species of candida causing infection in HIV patients, other species like Candida tropicalis, Candida glabrata, Candida parapsilosis, Candida kefyr and Candida krusei are also reported.1-4,6,7 A large study was conducted by Kaviarasan et al8 on candidiasis in HIV infected persons at JIPMER, Pondicherry. A total of 185 HIV infected patients with mucocutaneous lesions of candidiasis were subjected to clinical and microbiological evaluation. Oral candidiasis was observed in 63 cases (85%). Among 63 patients with oral candidiasis, 48 patients with candidiasis had oral candidiasis with dysphagia indicating oesophageal candidiasis. In the remaining patients with oral candidiasis, there were no oesophageal symptoms. In that study also Candida albicans was the commonest isolate in 60.5% cases followed by Candida tropicalis (8.4%), Candida parapsilosis (8.4%) and Candida kefyr in 3.4%.

Ketoconazole 200 mg/kg twice daily for 2-3 weeks is the first recommended systemic imidazole shown to be effective in Candida oesophagitis, providing superior results. Optimal gastric absorption of Ketoconazole occurs with acidic gastric pH. Our patient responded well to oral Ketoconazole treatment.7 To conclude in an HIV seropositive patient with symptoms of oesophageal candidiasis without oropharyngeal candidiasis, the diagnosis may be confirmed by barium swallow X-ray study and endoscopy to differentiate from other viral causes so that appropriate antifungal treatment can be started to manage the patient.

References