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FREQUENCY OF ESOPHAGEAL CANDIDIASIS IN NON HIV DYSPHAGIC PATIENTS ON UPPER GI ENDOSCOPY

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ABSTRACT

BACKGROUND: There is growing incidence of candida esophagitis due to the increasing numbers of immune compromised patients, intensive chemotherapy, bone marrow transplantation, high dose oral and inhaled corticosteroids, potent antibiotic therapy, alcoholism and chronic illness such as diabetes mellitus and liver cirrhosis all have contributed to this increase. The diagnosis is made based on physical examination. Grams stain of the smear (hyphae) may further add in the diagnosis. Endoscopic diagnosis is based on characteristic lesions. This study was carried out to assess the status of esophageal candidiasis in non HIV infected patients attending a teaching hospital.

OBJECTIVE: To estimate the prevalence of esophageal candidiasis in non HIV patients presenting with dysphagia and to assess the underlying risk factors.

MATERIAL AND METHODS: It is a retrospective observational study, carried out at Lady Reading Hospital, Peshawar, Pakistan from September 2008 to November 2010. All the patients presenting with dysphagia underwent upper GI endoscopic examination during 2008 to 2010. The cases thoroughly reviewed regarding their history examination and findings of the endoscopy. Patients with HIV / AIDS were excluded. Results were compiled and statistically analyzed.

RESULTS: A total of 200 cases were included. Male to female ratio was 2.1 : 1. Mean age was 52.9 $\pm$ 14.6. The main indications were dysphagia/odynophagia. Esophageal candidiasis was found in 28 patients, out of which, 20 were male and 08 were female. The underlying risk factors were also assessed. The major risk factors were steroid therapy, uncontrolled diabetes mellitus, carcinoma esophagus and stomach, broad spectrum antibiotic and chronic liver diseases.

CONCLUSION: Dysphagia is a significant presenting feature of candida esophagitis Anti-fungal treatment for 2 to 3 weeks is recommended on empirical basis in high risk patients for esophageal candidiasis. If no improvement, then upper GI endoscopy is recommended.

KEY WORDS: Esophageal candidiasis, Non-HIV, dysphagia.

INTRODUCTION

Fungi are ubiquitous organism in nature. Humans are continually exposed to multiple genera of fungi via various routes, but particularly oral route leads to colonization of gastrointestinal tract. Fungal infection depends on the interaction between host mucosal defense mechanism, fungal virulence factors and antifungal utilization[1]. of the numerous pathogenic fungi, candida is the dominant genus responsible for fungal disease in humans[2]. Candida Albican is the species with the highest prevalence among human yeast isolates and is the main opportunistic yeast pathogen in most warm blooded animals[2]. Symptomatic mucosal candidiasis arises in subjects colononized with candida who are predisposed by illness, debility or a local reduction in host resistance to an over growth of their indigenous flora. Candida species are frequently isolated from the oral cavity and are detected in 31 to 60 % of healthy individuals[2,3]. The colonization rates generally increase with severity of illness and duration of hospitalization[4].

Esophageal candidiasis is an opportunistic infection often arises in individuals with impaired immunity and is the most common cause of esophageal diseases in human immune deficiency virus infection[5].

It also arises in debilitated patients who have received broad spectrum antibiotics, steroids and immuno suppressants. In the light of organ transplantation and AIDS, Esophageal infection is now a common medical problem[6].

In the presence of high prevalence rate of HIV and AIDS, in Europe, several studies have been conducted. However, the incidence of AIDS and HV prevalence are still very low in Pakistan[7]. The Aim of the study was to assess the common Risk factors and prevalence of Esophagial candidiasis in non HIV patients presenting with odynophagia / Dysphagia

MATERIAL AND METHOD

This Hospital based retrospective observational study was conducted in Medical "B" Unit Lady Reading Hospital Peshawar from September 2008 to November 2010. Major complaints of these patients were odynophagia/dysphagia. All relevant haematological and bio-chemical investigations were done. These include CBC, Random Blood Sugar, Hepatitis B,C and HIV screening. Only one patient was found to be HIV positive, who was excluded from the study.

All these patients were subjected to upper G1 endoscopy during the allotted days of Medical "B" Unit. Endoscopic procedures were done with the help of Olympus video scope, using topical pharyngeal anesthesia (2% topical xylocaine spray) to prevent gag reflux

Esophageal candidiasis was diagnosed on the basis of characteristic lesions, creamy white plagues that could be removed from the mucose with the help of the scope leaving behind red mucosa with or without bleeding. Image-I

IMAGE- I

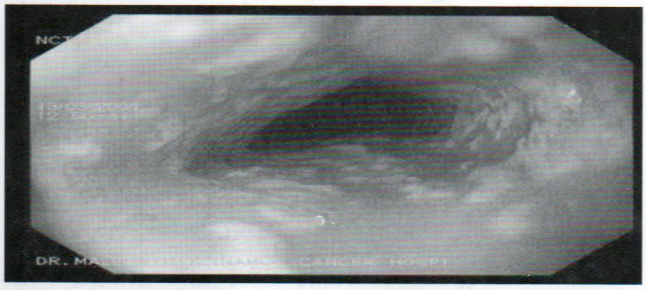
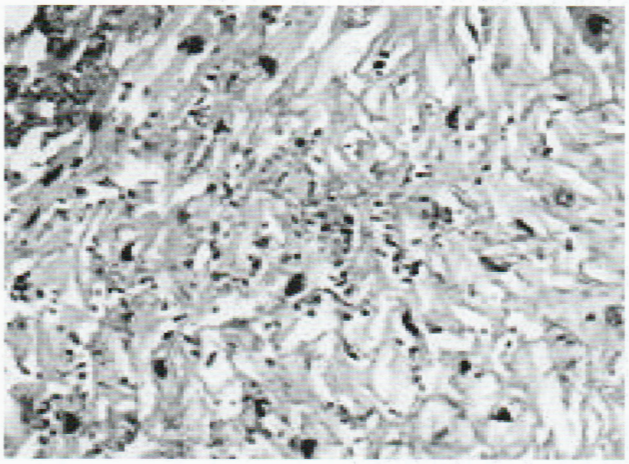


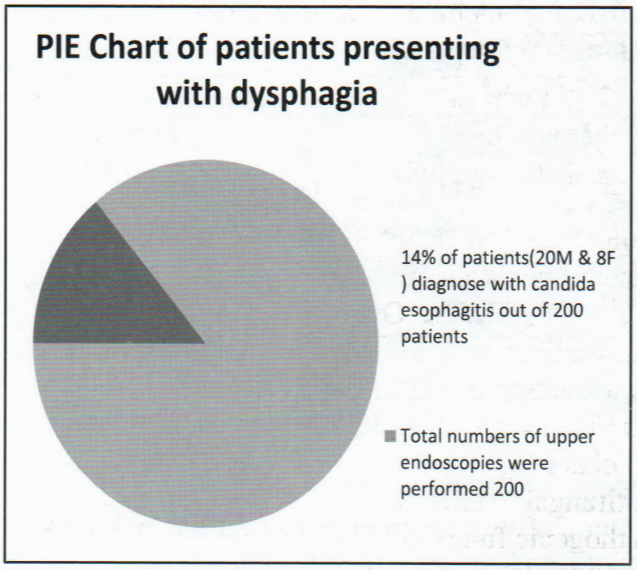
IMAGE II



H&E stain of esophagus showing Candida hyphae within the lamina Propria. Diagnosis was further strengthened by esophageal biopsies from the lesions. Image-II

RESULTS

During the study period, 200 upper endoscopies were performed in our endoscopy room during allotted days of Medical "B" Ward. Twenty eight patients were diagnosed with candida esophagitis on the basis of endoscopic and histopathologic criteria as shown in the given pie chart.



Pie Chart of patients presenting with dysphagia

The age, sex and percentage of in patients are given in table[1].

Table 01 Occurrence of esophageal candidiasis in patients with reference to their sex and age. Total No. of trialist 200 (Male - 140 Female- 60)

Sex	Age group	No. of positive cases	%age
Male	Below 20	2	10 %
	20 – 40	3	15 %
	40 – 60	5	30 %
	Above 60	9	45 %
Total	**20**		
Female	Below 20	1	12.5 %
	20 – 40	2	25 %
	40 – 60	4	50 %
	Above 60	1	125 %
Total	**20 + 8 = 28**		
Range	21 – 77		
Mean ± SD =	52.9 ± 14.6 %		

Table-1 occurrence of E.C in patients

RISK FACTORS

The common Risk factors for candida esophagitis were carcinoma, uncontrolled diabitics mellitus, corticosteroid therapy and antibiotic. Table-2

Risk Factors	Cases	Percentage
Steroid Therapy	8	28.5 %
Diabetics mellitus	7	25 %
Carcinoma Esophagus and stomach	7	25 %
Broad spectrumAntibiotic	4	14.2 %
Chronic liver disease	2	7.1 %

Table-2 Risk Factors for E.C

DISCUSSION

Our study is an attempt to find the risk factors and endoscopic manifestations of candida esophagitis in non HIV patients, in an area where HIV is not endemic.

All of our patients diagnosed with candida esophagitis revealed no oral thrush. This was similar to a study by Bonacinietal in which 110 HIV positive patients with esophageal symptoms, 38 % of those without oral thrush had candida esophagitis[5]. Our study shows that the occurrence of esophageal candidiasis in non HIV patients is more in middle aged individuals of both sexes. Similar findings are reported by Badarinarayanaroet all[8].

In our study, we found 19.6% with esophageal candidiasis had malignancies. This disorder leads to stasis due to mechanical obstruction that predisposes to candida esophagitis[9]. However, obstruction was not a feature in our cases of candida esophgitis associated with malignancies.

In this study, we also noted that steroid intake, oral, intravenous and neubulization in varying duration and doses of therapy carries a high risk for candida esophagitis.

A high frequency of bacterial or mycotic infection has been reported in HIV associated membranoproliferatio glomerulonephritis and DM due to acquired defects of polymorphonuclear leukocytes (PMN) functions[10-11].

In our study we also found that prolonged and high dose of broad spectrum antibiotic is also a risk factor for esophageal candidiasis. Broad spectrum antibiotics may eliminate certain bacteria that inhibit fungal growth, thereby enhancing candida overgrowth[12-13-14].

In our study, we found 14% patients presenting with dysphagia. This in contrast to the study done by R.B Chapparbandiet all[15]. who showed 6% patients with esophageal candidiasis presenting with dysphagia. This could be due to the fact that they had conducted the study in patients with upper GI symptoms, whereas our study focused on Dysphagic / Odynophagic patients only.

CONCLUSION

Carcinoma, diabetes mellitus especially if the sugar level is not well controlled, corticosteroids and broad spectrum antibiotic therapy in debilitated patients are major risk factors for

candida esophagitis, frequently presenting with dysphagia/odynophagia. Hence, anti-fungal treatment for 2 to 3 weeks is recommended on empirical basis in high risk patients for esophageal candidiasis presenting with dysphagia/odynophagia. If the symptoms subside then diagnosis of esophageal candidiasis is made and no further investigations are needed. However, if the infections persist or if there are other factors involved, and then patient should undergo upper GI endoscopy. Moreover, we also recommend good glycaemic control in diabetic patients and cautious use of antibiotic and cartico steroids in debilitated patients.

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