ESOPHAGEAL CANDIDIASIS – CASE STUDY

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ABSTRACT:

Infectious esophagitis most commonly manifests as oesophageal candidiasis (EC). The oesophagus is second only to the oropharynx in the gastrointestinal tract in terms of susceptibility to candida infection. Patients who have impaired immune systems, such as those with leukemia, diabetes, HIV/AIDS, corticosteroids, radiation therapy, and chemotherapy, are particularly vulnerable. Individuals with oesophageal motility disorders (scleroderma and cardiac achalasia) and those who have taken antibiotics frequently make up another category. Patients reported experiencing soreness behind the sternum, trouble swallowing, and pain when swallowing. Physical examination reveals the presence of a plaque, which frequently coexists with oral thrush. By directly witnessing the white mucosal plaque-like lesions and exudates adherent to the mucosa, endoscopic examination is the most effective method to identify this disease. It was diagnosed by the lab details (hemoglobin 9.7 g/dl, RBC 3.7 10^6/ul, and US oesophageal scan), which show small white spots in the oesophageal mucosa. By the above scan, the disease is diagnosed in patient[1].

Keywords: *Esophagitis, Oropharynx, Candida infections, Scleroderma*

1. INTRODUCTION:

Candida is a yeast organism that normally coexists with healthy people's urogenital and alimentary canal surface epithelium as part of their natural flora. A compromised immune system, either localized or systemic, might result in candida overgrowth and subsequent candida infection. More than 15 different species of candida are known to cause illness; C. albicans, C. glabrata, and C. tropicalis are the most prevalent infections. Both the degree of immune system damage and the pathogenicity of these infections vary among animals. The majority of mucosal candida infections in the general population affect the oropharynx, oesophagus, and vagina. With an incidence of up to 88%, candida infection of the oesophagus is the most common cause of infectious esophagitis. Normally, candida lives in the oesophagus as a symbiont. Candida can grow and create sticky plaques in the esophagus mucosa when host defense mechanisms are compromised. The nonkeratinized stratified squamous epithelium, a protective innate immune mechanical barrier, naturally lines the mucous membrane of the oesophagus. The nonkeratinized stratified squamous epithelium, a protective innate immune mechanical barrier, naturally lines the mucous membrane of the oesophagus. As a result, Candida albicans may comprise around 20% of the commensals that colonize the oesophagus in certain people. On the other hand, immune system dysfunction and local lesions in the oesophagus and upper cortex can result in the growth and colonization of Candida albicans. Then, candida attaches itself to the mucous membrane to produce patches that are yellow-white in color. During upper endoscopy, the plaques are visible, and water irrigation is unable to remove them from the mucosa. These plaques might be localized in the upper, middle, or distal oesophagus, or they can be distributed across the entire oesophagus[2]. Early infection detection and removal are crucial to improving patient outcomes because persistent EC can lead to serious consequences such as oesophageal hemorrhage, perforation, or strictures[3].

Table 1: Department of Pathology (Complete Blood Picture)

Test Description	Results	Units	Ref.Range
WBC	8.1	10^3/ul	4.0-11.0 10^3/ul
RBC	3.7	10^6/ul	4.5-5.5 10^6/ul
Heamoglobin	9.7	g/dl	13.0-17.0 g/dl
Neutrophils	51	%	40-80%
Lymphocytes	29	%	20-40%

Monocytes	08	%	2-10%
Eosinophils	12	%	1-6%
Basophils	00	%	<1-2%
Platelets	2.05	Lakh/Cumm	1.50-4.50 lakh/cumm
MCV	83.4	fl	83-101fl
MCH	25.9	pg	27-32pg
MCHC	31.1	g/dl	31.5-34.5g/dl

Table 2: Department of Biochemistry (Serum Electrolytes)

Test Description	Results	Units	Ref.Range
Sodium	138	mmol/L	135-150mmol/L
Potassium	3.6	mmol/L	3.5-5.0mmol/L
Chlorides	102	mmol/L	94-110mmol/L

Table 3: Department of Biochemistry (Liver Profile, Random Glucose, Blood Urea, Serum Creatinine)

Test Description	Results	Units	Ref.Range
Serum Total Protein	6.8	g/dl	6-8 g/dl
Serum Albumin	3.2	g/dl	3.5-5.2 g/dl
Serum Globulin	3.6	g/dl	1.8-3.6 g/dl
A/G ratio	0.8		1.2-1.7
Serum Total Bilirubin	0.8	mg/dl	0.2-2.0 mg/dl
Serum Direct Bilirubin	0.3	mg/dl	0.0-0.2 mg/dl
Serum Indirect Bilirubin	0.5	mg/dl	0.1-1.0 mg/dl
SGPT (ALT)	40	U/L	5-45 U/L
SGOT (AST)	48	U/L	5-35 U/L
ALP	48	U/L	53-128 U/L
Gamma GT	39	U/L	1-55 U/L
Random blood sugar	85	mg/dl	70-160 mg/dl
Blood Urea	58	mg/dl	10-50 mg/dl
Serum Creatinine	1.3	mg/dl	0.9-1.3 mg/dl

Table 4: Department of Urology

Test Description	Results	Ref.Range
Appearance	Slightly Turbid	Clear
PH	6.0	4.6-8.0
Proteins	Trace	Negative
EP cells	8-10	0-5/HPF
Pus cells	5-6	0-5/HPF
Specific gravity	1.022	1.001-1.035
Colour	Pale yellow	Pale yellow

US oesophageal scan

Impression:

- Small white spots in the oesophageal mucosa.

2. HISTORY:

This case involves a female patient of age 78 at the Chalmeda Anand Rao Institute of Medical Sciences (CAIMS). It occurred in 2023. She consulted the doctor with symptoms of abdominal pain in the past 1 month, left hypochondriac region, dragging type of pain, non-radiating, fever since 1-week low grade, intermittent relief on medication, dry cough in the past 1 week, SOB grade II sine 4 months, constipation in the past 4 days, burning micturition in the past 1 month, vomiting 5 days ago, 2 episodes per day, and giddiness sine 2 months.

Past medical history:

The person does not have any disease or condition; she came with symptoms like abdominal pain,fever, dry cough, SOB, constipation, burning micturition, vomiting, and giddiness.

Social history:

Previously, the patient was a tobacco chewer but stopped 20 years ago.

3. DISCUSSION:

The patient was ordered to test for the following:

- A complete blood pictures
- Randon's glucose levels
- Blood urea
- Serum creatinine
- Serum electrolytes
- Liver function tests
- Urology
- US oesophageal scan

4. RESULTS/ CONCLUSION:

These are the results of the patient's tests to find out the disease from which she is suffering.

5. Source of Funding:

None

6. Conflict of interest:

None

7. References:

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