



A Rare Case of Carcinoma Oesophagus in 16 Year Old Male Patient Nutritional Deficiency

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Abstract

Esophageal carcinoma is commonly seen in elderly. Most common etiological factors are environment related with constant long term exposure of carcinogens. Hence, it is rarely seen in younger age groups (<18 years). Till date only few cases have been reported in world literature. In our case report we present squamous cell carcinoma esophagus in young male (16 yr old) with no predisposing factors except for past history suggestive of scurvy and combined iron and vitamin b12 deficiency anemia. Patient was taken up for surgery after building up his hemoglobin by blood transfusion and multivitamin infusions. Ivor lewis oesophagectomy was performed with transthoracic anastomosis. Post operatively patient recovered well from surgery and patient was given chemoradiation. In Indian scenario which is a developing country with majority of population having nutritional deficiency randomized control study linking vitamin deficiencies with malignancy of oesophagus is lacking. This case report can be an impetus for carrying out randomized control trials in developing countries to study association of vitamin deficiency with carcinoma esophagus. Further studies need to be undertaken to prove whether supplementation of micronutrients can prevent carcinogenesis.

INTRODUCTION

Carcinoma esophagus is commonly seen in 6th and 8th decade. It is rare occurrence in younger age group. Various etiological factors have been

attributed in causing carcinoma esophagus like tobacco chewing, alcohol, mycotoxin, spicy diet
Containing nitrosamines and deficiencies

(vitamin A, C, riboflavin). Premalignant lesions like achalasia cardia, esophageal webs, barrett's esophagus, tylosis, plummer vinsons syndrome and corrosive stricture are also associated with carcinoma esophagus. In India and Asian countries squamous cell carcinoma is more common than adenocarcinoma. Lower 1/3rd adenocarcinoma is more common than squamous cell carcinoma.

CASE REPORT

A 16 years old male from rural area presented with history of dysphagia and vomiting immediately after consumption of meals from the past 9 months. He also presented with history of weight loss with decreased appetite and malaise. Patient's family gave history of bleeding gums and recurrent infections in childhood for which treatment was taken but details were not known. There was no history of alcohol, tobacco abuse, consumption of hot beverages, corrosive ingestion in the past, or excessive consumption of spicy or moldy foods. There was no family history of any malignancy.

On general examination patient was underweight with body mass index of 17.5. He had severe pallor with history of blood transfusion thrice in the past 6 months. He also had chelosis, bald tongue, koilonychia suggestive of vitamin B and iron deficiency. There was no evidence of cervical lymphadenopathy. Abdominal examination was normal.

Hematological investigation showed raised ESR and low Hemoglobin of 7.8g/dl with low vitamin

b12 and serum iron levels. Peripheral smear and blood reports showed vitamin b12 deficiency anemia with anisocytosis (macrocytic hypochromic type). Barium swallow was done showing irregular filling defect in lower 1/3rd of esophagus with shouldering (Fig 1). Esophagoscopy showed fungating growth in lower 1/3rd of esophagus with no evidence of bleeding. Multiple biopsies were taken and sent for histopathological evaluation which showed squamous cell carcinoma.



Figure 1:-barium swallow showing irregular filling defect in lower 1/3rd of esophagus

Subsequently computerized tomography (CT) scan was done which showed a Ulcero proliferative growth in the lower part of oesophagus with fat planes maintained between oesophagus and aorta with no evidence of lymph node metastasis. Patient was taken up for surgery after building up his hemoglobin by blood transfusion and multivitamin infusions. Ivor lewis

oesophagectomy was performed with transthoracic anastomosis. (In figure 2, 3, 4). Post operatively patient recovered well from surgery and patient was given chemoradiation.

The histopathological examination confirmed the squamous cell carcinoma of oesophagus with no lymphnode involvement with margins free. Postoperative follow up of 1 year has shown him to be disease and symptom free.

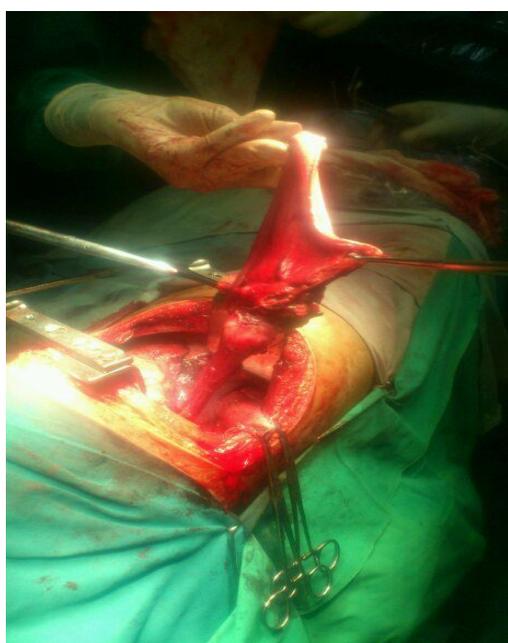


Figure 2:- Intra- Intra-Operative Image Showing Ulceroproliferative Growth in Lower 1/3rd of Oesophagus

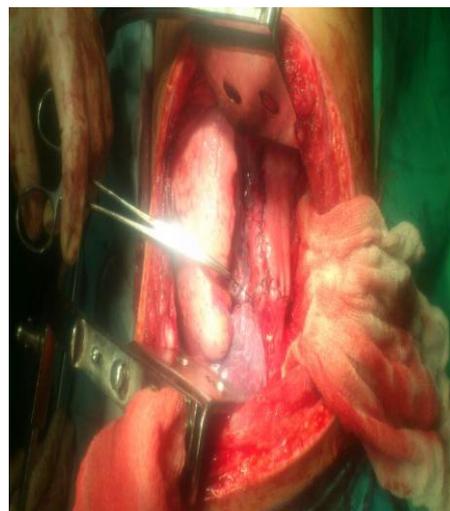


Figure 3: Intraoperative Photo Showing Transthoracic Anastomosis



Figure 4: Resected Specimen after Surgery

DISCUSSION

Carcinoma esophagus is a rare entity in children and adolescent age group. Carcinogenesis requires constant exposure to carcinogen over a long latent period to manifest as carcinoma. In case of carcinoma esophagus it exposure to tobacco, alcohol, corrosives, fungal contaminants and acid reflux which causes dysplastic changes in the epithelium leading to malignancy. This fact does not hold true in younger age group. The precursor in younger age group could be nutritional deficiencies, congenital lesions and familial syndromes.

Till date 109 cases of esophageal carcinoma have been reported in world literature in younger age group (<30years) to the best of our knowledge (1). Most cases have been reported in esophageal cancer belt stretching from northern Iran through the central Asian republics to North-Central China and 90% of cases are squamous cell carcinomas. Various studies have been conducted to link environmental factors with carcinoma esophagus of which only a few hypothesis have been proved by randomized control trails(2) (3) (4)

Carcinoma esophagus in young patients carries a grave prognosis due to delay in diagnosis of disease due to rarity of this cancer in young age group. In our case report strong suspicion of malignancy, early diagnosis and treatment lead to good prognosis and 1 year disease free survival.

Our case report is unique as the malignancy is in a young age group. Review of literature till now shows oesophageal malignancy in young age

group most commonly presenting histopathologically as adenocarcinoma in lower or middle 1/3 rd of esophagus associated with congenital anomalies like diverticula or duplication cyst. In our case report we present squamous cell carcinoma esophagus in young male with no predisposing factors except for past history suggestive of scurvy and present combined iron and vitamin b12 deficiency anemia. In Indian scenario which is a developing country with majority of population having nutritional deficiency randomized control study linking vitamin deficiencies with malignancy of oesophagus is lacking. This case report can be an impetus for carrying out randomized control trials in developing countries to study association of vitamin deficiency with carcinoma esophagus. Further studies need to be undertaken to prove whether supplementation of micronutrients can prevent carcinogenesis.

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