Case Report

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Carcinoma Esophagus in 12-Year-Old Girl: A Rare Case Report

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Abstract

Carcinoma esophagus is a disease of late age with very few cases reported in world literature of its occurrence in young age. The exact cause of this disease in teenagers is not known, but the treatment remains the same. We cam across one such case of a 12-year-old girl with squamous cell carcinoma Grade I of esophagus. The case is reported due to its rarity.

Keywords: Young age; Carcinoma esophagus; Squamous cell carcinoma.

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Introduction

Esophageal malignancies are commonly seen after fifth decades of life, and are very rare at a young age.[1] Till date, only a few cases of esophageal carcinoma in children have been reported in the literature.[2] Epidemiological studies have shown that esophageal malignancies are predominantly environment produced, and require a very long latent period for presentation, thus accounting for its rarity in childhood. The exact etiological or environmental risk factors is unknown in these reported cases, and therefore, the pathogenesis of the condition is still not known. We report a case of esophageal carcinoma in a 12 year old girl because of its rare incidence in this teenage group with a brief review of the literature.

Case History

We present here case of a 12-year-old girl who presented with difficulty in swallowing for 3 months, initially for solids then progressively for semi-solids and for liquids associated with chest and mid upper back pain for 2 months. She also has complaint of intermittent cough for 1 month and occasionally coughing blood in sputum for 15 days with history of significant weight loss in last 2 months. There is no history of vomiting or regurgitation of food after meals. There is no history of ingestion of any corrosive substance or tobacco chewing or history of any known genetic anomaly in the family. On examination she was lean and thin with anaemia and there was a palpable level VI lymphnode 4×3 cm hard and fixed to deep structures with uninvilved overlying skin. There was decreased air entry in left chest. Rest other systemic examination was unremarkable. Initial chest X-ray was normal and Acid fast Baccili in sputum were absent. X-ray barium swallow showed luminal narrowing in mid-esophagus with mucosal thickening of distal segment with the possibility of malignant mass in esophagus (Fig. 1). Contrast Enhanced Computed Tomography (CECT) Scan of chest showed diffuse circumferential mural

Fig. 1: X-Ray Barium swallow showing irregular filling defect and mucosal irregularity

thickening in lower esophagus with maximum thickness 11.3 mm with partial lumen narrowing, rest of upper esophagus is dilated, lower trachea, carina and proximal bilateral main bronchus are compressed with smooth indentation of left atrium of heart. There was no lymphadenopathy seen and rest of the structures appears normal so a possibility of lymphoma of lower esophagus was kept (Fig. 2). But the patient took symptomatic treatment only for two months and when the symptoms aggravated she came back and now CECT Scan Chest showed extensive diffuse circumferential thickening of the proximal, mid and distal esophagus with maximum width of 12 mm and 8.8 cm length involved with marked luminal narrowing of involved esophagus and mild dilatation of proximal esophagus. The gastro-esophageal junction and cardia of stomach appears uninvolved, lesion completely engulfing

Fig. 2: CT-Scan Thorax showing esophageal wall thickening

the left main bronchus with near complete left lung collapse, moderate left sided pleural effusion with marked shifting of mediastinal structures towards left, right high paratracheal and supraclavicular region lymphadenopathy present measuring 2.2 × 2.5 cm causing significant luminal narrowing of right internal jugular vein and abutting right common carotid and subclavian artery. There is a simple cyst in left hepatic lobe of liver and grade-I hiatus hernia was also present (Fig. 3). An upper gastroesophageal endoscopy showed ulcero-proliferative friable growth starting at 15 cm from incisors with severe luminal narrowing, scope was not negotiable beyond it and was suggestive of esophageal growth (Fig. 4). Histopathology of this

Fig. 3: CT-Scan Thorax Coronal section showing extensive esophageal growth

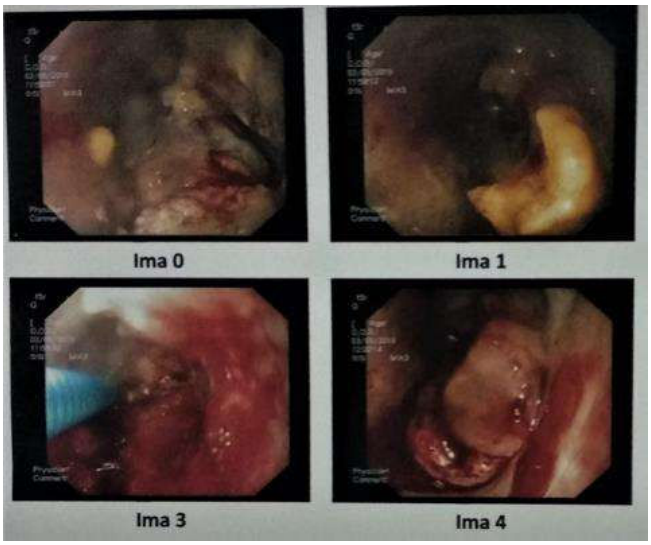

Fig. 4: Proliferative growth in esophagus seen on esophagoscopy

lesion revealed well differentiated squamous cell carcinoma (Fig. 5). The patient was adviced to take concurrant chemotherapy along with Radiotherapy but she took chemotherapy with methotrexate day1 and cisplatin day 2 to 5 with which she had improvement in swallowing. Now she was able to take semisolids. Radiation was to start on day 6 but she left the treatment and was lost to follow up.

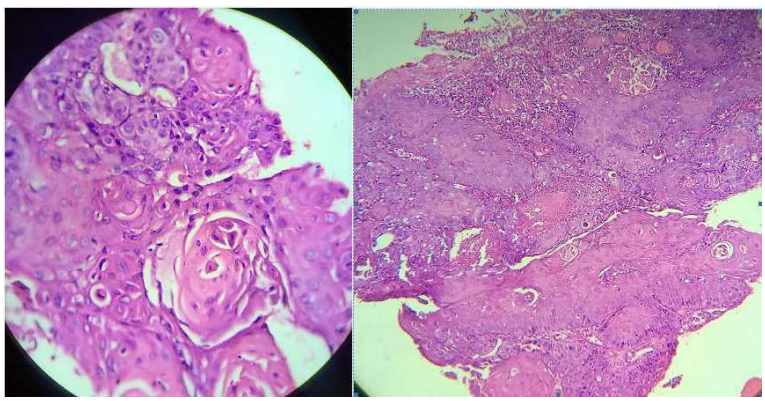

Fig. 5: Low and High Power view showing features of squamous cell carcinoma esophagus

Discussion

Carcinoma esophagus is a very rare entity in teenage and adolescents. It is commonly reported in fourth and fifth decade of life. Literature revealed very few cases of carcinoma esophagus in teenage group. Surprisingly, these cases mostly reported from India in comparison to other parts of the world. The youngest patient reported for esophageal cancer was an eight year old girl with growth in the middle third of the esophagus and lung metastases in 1980 from India.[3] Even reports from high endemic areas like China and Iran, where the incidence of esophageal carcinoma is among the highest and the disease is known to present at a relatively early age, do not mention any childhood incidence of the condition.[4]

Risk factors associated with development of esophageal malignancy are diet low in vegetables, fruits, animal products, deficiency of trace elements and minerals. Excess alcohol and tobacco use, exposure to polyaromatic hydrocarbons, increased intake of nitrosamines, nitrate-rich products like pickled vegetables, cured meat and fish, thermal irritation caused by hot beverages, soup and food, betel nut chewing may be predisposing factors.[5] Plummer vinson syndrome, achalasia and tylosis may be premalignant conditions. Previous history of esophagitis in siblings may also raise the suspicion of development of esophageal cancer. But none of these risk factors explains its occurrence in teenage, as these factors requires long latency period of 15–20 years for manifesting as carcinomas. Tampi reported a case of esophageal carcinoma associated with human papillomavirus.[1] Kinnman J, reported a case of a 15-year-old boy with squamous cell carcinoma of the upper esophagus with a past history of ingestion of lye accidentally. [6] Exposures to these risk factors and nutritional deficiencies in teenage group and in early life may lead to inflammation and weakening of esophageal epithelium, which results in the development of esophageal carcinoma. Our case also does not any history of nutritional deficiency and hence exact etiological factor cannot be established.

Conclusion

The management of carcinoma esophagus depends on the stage of the disease and is not influenced by the age of the patient and holds equally good results with surgery and radiotherapy for operable disease and with concurrent chemoradiation for inoperable disease. Our patient responded initially but did not took radiotherapy and was lost to follow up. To conclude, any teenage patient presenting with dysphagia must be thoroughly examined for the possibility of carcinoma esophagus.

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Ethical Issues: NIL

Conflicting Interest: NIL

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