

## Synchronous Carcinoma of Mid Oesophagus and Maxillary Sinus: A Rare Case Report

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**Abstract:** The incidence of synchronous second primary cancers (SPC) in patients with squamous esophageal cancer (EC) is reported to be 5% to 10%. The most wellknown sites for SPC are aerodigestive tract organs, such as the oral cavity, pharynx, larynx and lung. The association between SPCs and these cancers can be explained by a process called 'field cancerization,' which arises from exposure to common carcinogenic agents such as tobacco smoke. EC patients with synchronous SPC showed different clinical features and had poor survival due to challenges in providing stage-appropriate treatment. The unexpected diagnosis of synchronous SPC complicates physicians' therapeutic decision-making because details on the treatment and survival of EC patients with SPC are limited. The causes of their typically poor prognosis were found to be related to the difficulty of operation, higher rates of complications, patient intolerance, and disease progression, such that these patients were generally thought to be candidates for palliative care Here we report a rare case of synchronous malignancy of esophagus and maxillary sinus which was successfully managed in our institute by concurrent chemoradiation.

**Keywords:** Chemoradiation, Maxilla, Oesophagus, Synchronous malignancy.

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### I. Introduction

Reports of multiple synchronous cancers have been increasing due to prolonged lifespan and improvements in diagnostic techniques range from 5% to 20% in the literature. Synchronous primary malignancies refer to the occurrence of a novel type of cancer concurrently or within six months of the diagnosis of the initial primary malignancy. The incidence of multiple cancers of the esophagus and other organs reportedly ranges from 9.5 to 20.7 % most commonly situated in the upper aero-digestive tract. Synchronous malignancies associated with carcinoma oesophagus had been reported more commonly with stomach followed by oral cavity, pharynx, colon and ureter. As of now synchronous malignancy of oesophagus carcinoma and maxilla had not been reported yet [1,2]. We report a rare case report from our Regional cancer center.

### II. Case Report

A 57-year old male patient presented to our Department with history of dysphagia to solids for 5 months and dysphagia to the liquids for past one month. He also complained of left sided nasal discharge for 3 months along with nasal block. Patient is an ex-smoker, stopped for last 5 months after smoking of 5-6 cigarettes per day for 40 years. He gives past history of alcohol consumption for past 30 years of 1-2 pegs per day. No past history of GERD, epistaxis, loss of vision or loosening of tooth. Systemic examination of CNS, CVS, RS, Per Abdomen was normal. On local Examination Patient had left sided facial asymmetry with no mass visualised in nasal /oral cavity, no facial muscle dysfunction and loss of sensation. Vision was 6/6 in both eyes. No clinically palpable lymphadenopathy.

**Investigations:** Hemogram, serum biochemistry and ECG was normal. Viral status was Non-reactive. UGI endoscopy showed Ulcero-proliferative growth at 30 cms from incisor teeth (mid oesophagus) and the scope could not be negotiated beyond the growth. Biopsy taken from the growth. Histopathological Examination (UGI scopy biopsy specimen): revealed moderately differentiated squamous cell carcinoma. CECT THORAX showed Irregular and concentric wall thickening with luminal stenosis in the mid and lower oesophagus with locoregional lymph node metastasis. The patient was evaluated for persistent nasal stuffiness and facial asymmetry using CECT PNS which showed a neoplastic mass in the left maxillary sinus with bony erosion of medial wall of maxillary sinus. Patient underwent nasal Endoscopy and biopsy which showed squamous cell carcinoma – well differentiated.

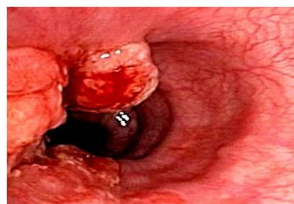


Fig1: UGI endoscopy



Fig 2: CECT Thorax

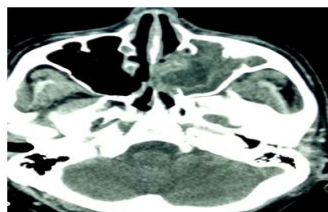


Fig3: CECT PNS

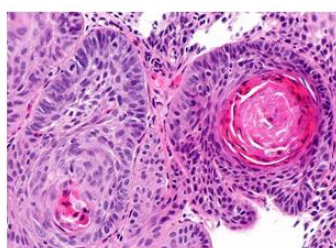


Fig 4: HPE of Oesophageal growth

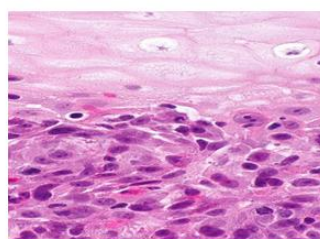


Fig5: HPE of Maxillary mass

**Treatment Given:** Patient underwent 3 cycles of induction chemotherapy with Inj. Docetaxel 120mg + Inj. Carboplatin 450mg + Inj.5FU 1.5g at 3 weekly interval. This was followed by External Beam Radiation Therapy using Theratron 780C (Cobalt 60) delivered to both the primary lesion simultaneously. The oesophageal lesion was treated in 2 phases: Phase 1: AP:PA(two field) technique upto a total dose of 40Gy in 20 fraction by SSD technique followed by phase 2: AP, RAO, LAO (three field) by SAD technique (20Gy in 10 fraction), a total dose of 60Gy in 30 fraction was delivered. Carcinoma of Maxilla (left) was treated by 2 field technique (AP and left lateral) a total dose of 60Gy in 30fraction was delivered. Concomitant chemotherapy with Inj. Carboplatin 150 mg weekly during radiation was delivered.

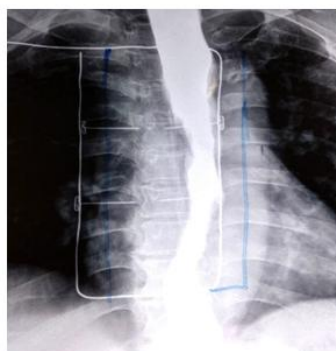


Fig 6: Barium swallow Marker film



Fig7: Radiation Portals for CAMaxilla

**Response Assessment:** Patient was assessed for early treatment response post 6 weeks following radiation therapy using bariumswallow, CECT Thorax and PNS showing both objective and subjective response. On evaluation, patient showed good regression of both the primary lesions and was graded as complete response based on RECIST 1.1 criteria. The patient was assessed at 3 monthly intervals and is still under regular follow-up.



**Fig 8:** Post treatment CECT



**Fig 9:** Post treatment CECT PNS

### III. Discussion

The histological criteria described by Warren and Gates for diagnosing multiple separate primary carcinomas are as follows. (1) Neoplasms must be clearly malignant as determined by histologic evaluation. (2) Each neoplasm must be geographically separate and distinct. (3) The lesions should be separated by normal-appearing mucosa. Synchronous carcinomas are those diagnosed at the same time or within a 6-month period after the diagnosis of the initial cancer. Metachronous carcinomas are secondary cancers that develop 6 months after the diagnosis of the primary cancer, usually after the treatment of the primary lesion.

With the increasing proportion of elderly people, multiple primary cancers has recently increased. In addition to the trends of an aging population and the development of novel diagnostic techniques, the incidence rate of single patients exhibiting multiple primary malignant neoplasms has seen a rapid global rise. Patients with multiple primary synchronous cancers are likely to show poor survival outcomes. A family history of cancer and genetic predisposition to cancer may be associated with a risk of multiple malignancies.

In patients with oesophageal carcinoma, the incidence of synchronous or metachronous multiple primary cancer including head and neck carcinoma and gastric cancer has increased [3]. There are no case reports on primary cancer involving oesophagus and maxillary sinus. In this case, we demonstrated the synchronous cancer of squamous cell origin in the esophagus and maxillary sinus. Esophageal cancer tends to spread axially, up and down the length of the organ and to regional lymphatics, producing morbidity and mortality. However, another cancer can be discovered synchronously. Therefore, when making a diagnosis, staging a cancer and evaluating treatment response, we should be aware that there may be potential cancer lesions other than the esophagus. Through prudent diagnosis and treatment plan, complete resection of the tumor burden and chemoradiation therapy for the unresectable lesion will lead to improvement in patient survival. Chemoradiotherapy has been shown to definitively treat squamous cell carcinoma of the oesophagus even in elderly patients [4].

Early diagnosis seems to be the most important factor in the management of paranasal sinus malignancies, since the primary cause of death is failure to control local disease. In that sense, the relative lack of specific symptoms indicating that malignancy is present or lack of awareness and cautious on routine radiographic findings seems to be reasons behind such misinterpretation and delay in diagnosis.

The presence of synchronous tumors of the oesophagus presents a therapeutic challenge. No guidelines currently exist for their management and the only published experience is in the form of case reports. Treatment modalities include surgery, chemotherapy, and radiation therapy alone or in combination.

### IV. Conclusion

This report constitutes data in terms of clinical course, prognosis, treatment modality and survival of such synchronous malignant tumor and open discussion on likelihood chemoradiation in Synchronous carcinoma of mid oesophagus and maxillary sinus.

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