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Synchronous Malignancy in Oral Cavity & Esophagus: A Rare Case Report

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Abstract— *Synchronous malignancy in oral cavity and esophagus is a rare entity. A very few case reports have been described on this rarity in literature. Second malignancy is associated with poor prognosis. Herein, we report a case of synchronous malignancy of buccal mucosa and esophagus highlighting its treatment and overall survival.*

Keywords— *Buccal mucosa: Esophagus: Synchronous malignancy.*

I. INTRODUCTION

The incidence of head and neck cancer combined with esophageal cancer is approximately around 2%-24%.[1] Esophageal carcinoma must be systematically looked for before the treatment of head & neck carcinomas, after and during follow-up. The definition for classifying a tumor as a second primary malignancy remains consistent since it was first proposed by Warren et al., histological confirmation of malignancy in both the index and secondary tumors, tumors should be separated by at least two centimeter of normal mucosa, if the tumors are recurring at the same site, then they should be separated by at least 5 years in time and metastatic tumor should be ruled out.[2] Synchronous second primary cancers are identified within 6 months of the index tumor. Studies shows that survival of synchronous cancer is lower than the metachronous cancers.[3] The treatment and survival outcomes for synchronous head and neck and esophageal carcinoma are not well-known due to its low incidence of this disease. Hence, this case report holds value in making treatment decisions and patient counselling for survival outcomes in synchronous malignancies of buccal mucosa and esophagus for future purpose.

II. CASE

A 50-year-old man, without any comorbidities or chronic illness, presented with difficulty in swallowing mainly to solid food for last 2-months, which was insidious in onset and gradually progressive in nature. He also developed hoarseness of voice which was insidious in onset, gradually progressive and associated with mild throat pain that was relieved partially by oral analgesics. Patient was a chronic smoker and alcoholic for past 25-years. General physical and systemic examination was within normal limits. On local examination, ulcero-proliferative growth of size 3.0 × 3.0 cm was seen involving right buccal mucosa, extending up to ipsilateral retro-molar trigone, which was firm in consistency and mildly tender. There was no significant lymphadenopathy palpable in neck region. Complete hemogram and biochemical profile of the patient were within normal limits. The incisional biopsy of the above-mentioned lesion revealed well differentiated squamous cell carcinoma. Upper gastrointestinal (GI) endoscopy showed ulcero-proliferative growth causing luminal narrowing at cervical oesophagus, 16.0 cm from the incisor teeth. Biopsy from this lesion revealed moderately differentiated squamous cell carcinoma.

Positron emission tomography-computed tomography (PET-CT) revealed metabolically active lesion involving cervical and proximal thoracic oesophagus extending from C5-D3 vertebra approximately 8.0 cm in length along with metabolically active bilateral multiple cervical, right supra-clavicular & para-esophageal lymph nodes, largest measuring 1.8 × 1.3 cm. It also revealed metabolically active well defined lesion of size 1.6 × 1.9 × 1.2 cm in apical segment of right lung upper lobe suggestive of metastasis with infiltration of overlying pleura and fat along with metastatic gastro-hepatic, supra-pancreatic and mesenteric lymphadenopathy.

As patient initially not willing for surgery or radiation therapy, 6-cycles of 3-weekly intravenous palliative chemotherapy with docetaxel 120 mg and carboplatin 450 mg were given. Post treatment PET-CT revealed metabolically active lesions in buccal mucosa, cervical and upper thoracic esophagus with near total luminal narrowing extending from C6-D3 vertebrae.

As disease was progressive, patient was given palliative radiation therapy 20 Gy in 5 fractions over 5 days to extended neck and chest. Post treatment patient had partial symptomatic relief and was put on metronomic chemotherapeutic trial with tablet gefitinib 250 mg once daily. Presently patient is on regular monthly follow up with gefitinib therapy for last 6-months and doing well without any progression of disease.

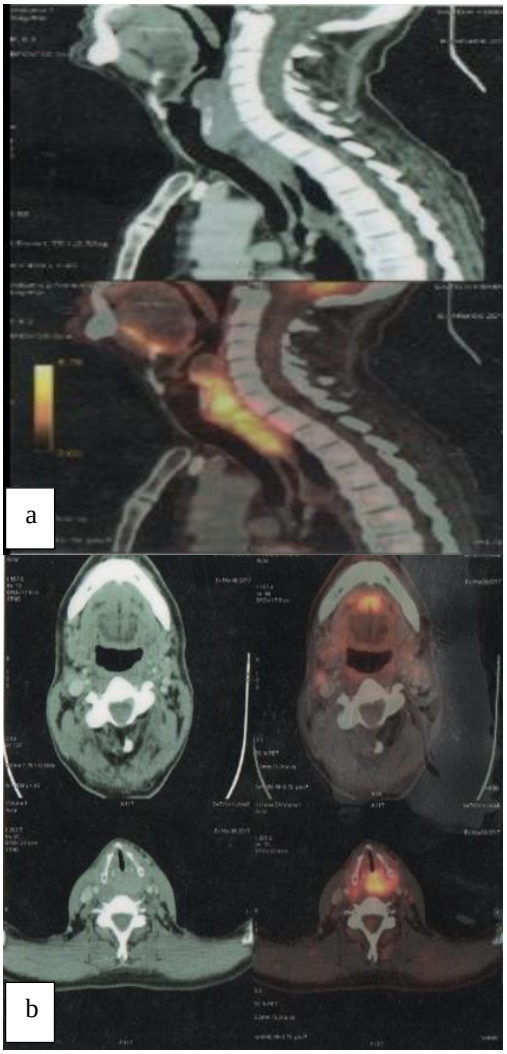

Figure 1 – a) Sagittal view on PET-CT shows ill-defined growth by FDG uptake in cervical esophagus extending to thoracic esophagus. b) Cross sectional view shows growth by FDG uptake in buccal mucosa

III. Discussion

In this case report, we evaluated the presentation, treatment, outcome and survival of a 50-year-old male patient with synchronous malignancy of oral cavity and esophagus. Head and neck squamous carcinoma commonly associated with the carcinoma of the esophagus as synchronous primary. Synchronous or second primary malignancy (SPM) is a leading long-term cause of mortality in patients with head and neck malignancies and is associated with poor outcome.[4] Attributable risk factors for the high incidence of synchronous malignancies in head and neck and esophagus region in males remain smoking tobacco, alcohol drinking, betel quid chewing and food habits amongst many.[5] The prevalence rate remains almost the same in most studies, 5-year overall survival (OS) of 44% has improved compared with historical studies where 5-year OS was less than 30%.[4] It is suggestive of increased physicians' awareness to screen for SPMs, improved treatment options and efficacy, and success of lifestyle modifications programs, such as tobacco cessation and cancer-screening programs. Detecting SPMs and cancer screening during follow-up is particularly important for those with human papilloma virus (HPV) related oropharyngeal cancer, as this subgroup of patients show good prognosis and long-term survival.[4] Genetic event causing loss of heterozygosity (LOH) is common in cancer development, LOH analysis is one of the molecular techniques for studying the clonal relationship between two tumors. A recent review on the evolutionary process on field cancerization showed role of clonal diversity in the prognoses of many cancers. Thus, primary tumors originating from multiple fields is associated with poor prognosis. Protocols should be laid to accurately distinguish SPM from metastatic tumor for a better treatment plan and follow-up care of head and neck squamous cell carcinoma (HNSCC) and esophageal cancer patients.[6]

Chen et al conducted a retrospective study on long term treatment results and prognostic factors of synchronous and metachronous squamous cell carcinoma of head and neck and esophagus.[5] They concluded no definite treatment protocol is present until now to treat such patients. A multidisciplinary team management is needed to make decisions regarding whether to treat both simultaneously or not, whether to give chemotherapy with or without radiotherapy. Most patients of esophagus carcinoma underwent surgery followed chemoradiation. Surgery for head and neck cancer is limited to solitary in oral cavity if present, most patients were treated with chemoradiation. Overall survival at 1st, 2nd and 3rd year was reported to be 77.1%, 57.1% and 37.1% respectively with median survival time of 33.5 months. Multivariate analysis contributed to the advanced esophageal carcinoma being important prognostic factor associated with poor outcome.[5]

However, in our case report patient was first treated with 6-courses of 3-weekly chemotherapy with intravenous injection docetaxel and carboplatin. Sam et al evaluated role of docetaxel and carboplatin in advanced head and neck cancer which cannot be operated showed response probability of 25% and median survival of 7.4 months.[7] Chemotherapy was followed by radiotherapy 20 Gy in 5 fractions in 5 days to face and neck region. Post-treatment patient showed partial response and thereafter was put on metronomic chemotherapy with tablet gefitinib 250 mg once daily. Studies have shown good overall response rate and better quality of life with gefitinib in advanced head and neck squamous cell carcinoma.[8] Our patient is on regular follow up since past 6 months with no progression of symptoms or disease.

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