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Case Report

Oropharyngeal adenocarcinoma as a rare presentaton secondary to gastric adenocarcinoma: a case study

Rajiv Kumar Jain[1], Deepak Kumar Gupta[1], Chultim Dolma Bhutia[1], Ashvanee Kumar Chaudhary[1]*, Vishwambhar Singh[1], Mohit Mangla[2], Lincoln Pujari[3], Ipsita Dhal[4]

[1]Department of Otorhinolaryngology, [2]Department of General Surgery, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India
[3]Department of Radiation Oncology, [4]Department of Pathology, Homi Bhabha cancer hospital and MPMMCC, Varanasi, Uttar Pradesh, India

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***Correspondence:**
Dr. Ashvanee Kumar Chaudhary,
E-mail: drashvaneebhu21@gmail.com

ABSTRACT

Adenocarcinoma of oropharynx is a rarely encountered entity. It may be primary or secondary as metastasis from a distant site. Secondary adenocarcinoma of base of tongue is even more uncommon, few cases have been reported in the literature till date including one from stomach as a primary site. We are presenting a case of secondary adenocarcinoma of base of tongue metastasised from stomach after one and half years of successful treatment consisting of surgery and adjuvant chemotherapy.

Keywords: Oropharynx, Adinocarcinoma, Gastric carcinoma, Radiotheray, Chemotherary, CDX-2

INTRODUCTION

Oropharyngeal malignancy constitute less than 10% of all head and neck malignancies in spite of an increasing incidence in world.[1] Alcohol and tobacco are established risk factors for head and neck malignancies either individually or synergistically.[2-4] Human papilloma virus (HPV) specifically genotype 16, is an additional, independent, risk factor for squamous cell carcinoma in oropharynx.[5] Adenocarcinoma is a common histological malignancy of digestive system but it is rarely reported in oropharynx.[6] Adenocarcinoma is the most common type (95%) of gastric cancer followed by lymphomas (5%).[7,8] Oropharyngeal adenocarcinoma may be primary or metastatic.[9] Primary tongue adenocarcinoma originate from minor salivary glands.[9] A case of oropharyngeal adenocarcinoma (intestinal type) with mucinous features which was associated with cervical lymph node metastasis with no identifiable primary in gastrointestinal tract is being reported.[9] This case is a rare metastatic adenocarcinoma of oropharynx secondary to gastric adenocarcinoma.

CASE REPORT

A 61 year old male presented in otorhinolaryngology OPD in March, 2020 with difficulty in swallowing for one month associated with generalised weakness and weight loss. He used to work in wood furnishing industry and gave history of addiction to tobacco. The patient gave history of stomach cancer in November, 2018 for which he underwent total gastrectomy with Roux-en-Y esophagojejunostomy with cholecystectomy in department of general surgery in hospital which is a tertiary care centre in eastern part of India on 1 November 2018. The histopathological study revealed well differentiated adenocarcinoma of stomach with free resected margins and chronic cholecystitis with

cholelithiasis, omental tissue was free of tumour. He received adjuvant chemotherapy consisting of six cycles of CAPOX regimen (capcitabine & oxaliplatin), completed on 16 April 2019.

During clinical examination, on palpation approx 1.0 cm level 2 cervical lymph node was palpable. Indirect laryngoscopy revealed a large, diffuse irregular growth largely situated on left side of oropharynx involving base of tongue and valleculla with normal laryngeal anatomy, the findings were further confirmed with fibre optic laryngoscopy (Figure 1-2).

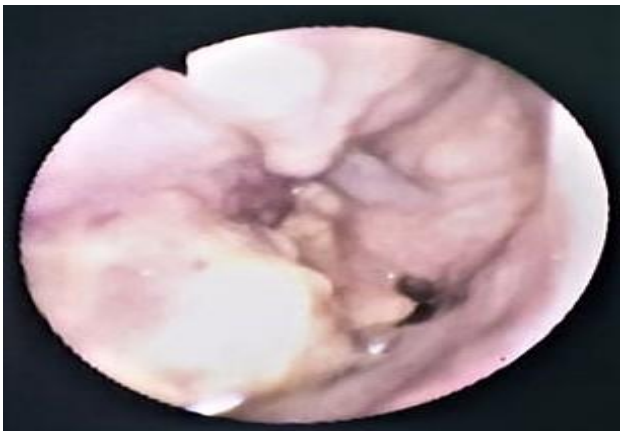

Figure 1: Fibre optic laryngoscopy demonstrating proliferative growth at base of tongue and valeculla.

Figure 2: Fibre optic laryngoscopy showing free vocal structure.

The patient was advised CECT neck and larynx which showed an ill-defined heterogeneously enhancing soft tissue density mass lesion measuring approximately 3.0×2.5×3.1 cm epicentered in left side of the base of tongue causing partial airway obstruction. Few subcentric left side level 1b (largest 8.8 mm) and multiple enlarged bilateral level 2, 3 and 4 cervical lymph nodes were noted, largest one measuring 1.1 cm in short axis diameter. (Figure 3-5). Multiple lytic lesions were seen in vertebral body of cervical spine with decreased intervertebral space at C5-C6 level. Routine blood investigations were done and the patient underwent direct laryngoscopic guided biopsy under local anaesthesia and sent for histopathological study which was strongly suggestive of well differentiated adenocarcinoma (metastatic) showing atypical cells in acinar pattern displaying pleomorphic vesicular nuclei, prominent nucleoli and moderate amount of cytoplasm. Its gastric origin was supported by immunohistochemical analysis of the tissue displaying positivity for CK7 and CDX-2, while it was negative for CK20 (Figure 6A-D).

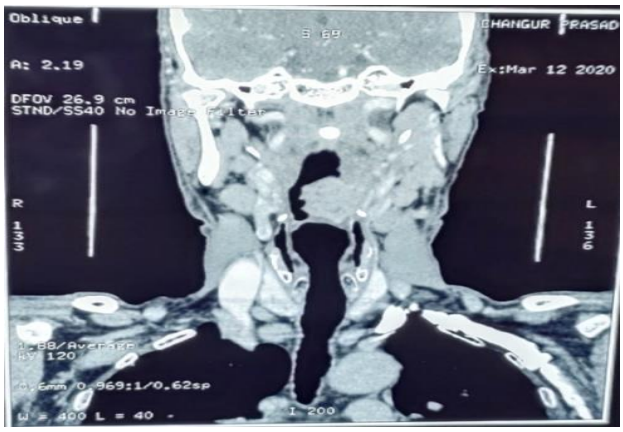

Figure 3: Coronal section.

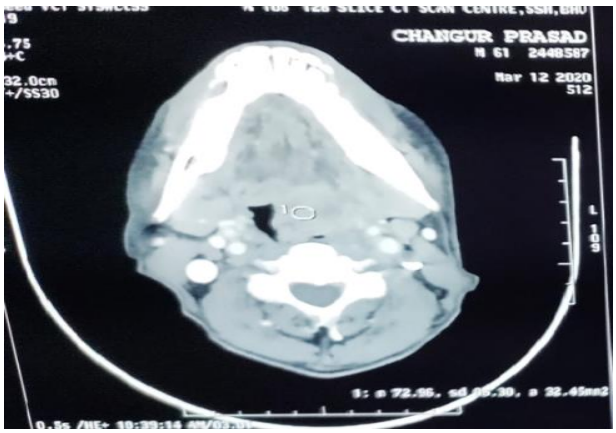

Figure 4: Axial section.

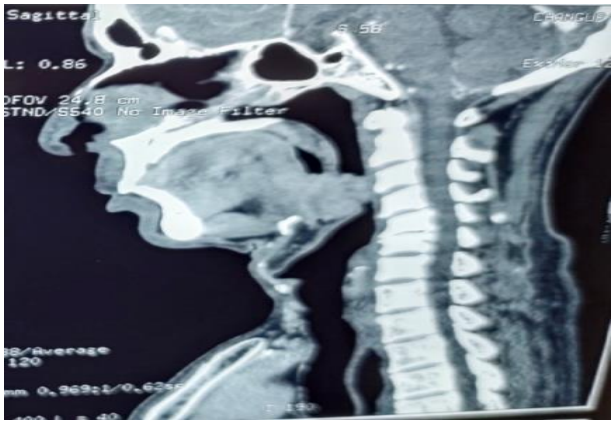

Figure 5: Saggital section.

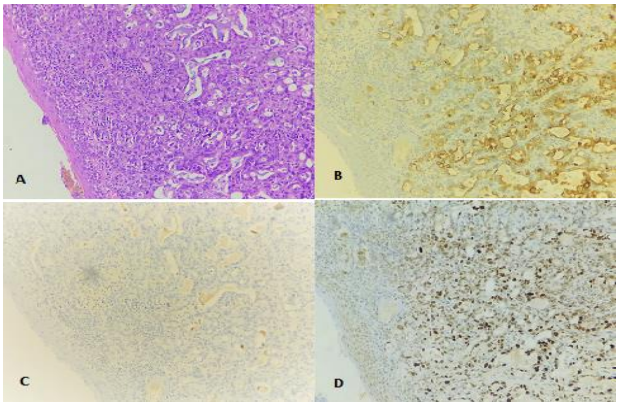

Figure 6: (A) Microsection shows stratified squamous epithelial lining on the left side and underlying tumor cells arranged in glandular pattern, (B) tumor cells are positive for CK7, (C) CK20 is negative, (D) tumor cells show diffuse nuclear positivity.

The patient was referred to radiation oncology department for further management. Patient was managed with radiotherapy, palliative radiotherapy to the gross tumour encompassing the lytic lesions of the vertebrae to a total dose of 20 Gy/5 #s at 4 Gy per fraction over a period of 5 days from a linear accelerator with conventional technique by 6 MV photons from 13 April 2020 to 17 April 2020 (Fig 7A-C). After radiotherapy patient improved in symptoms, (Figure 7C) and showed decrease in size of oroprharyngeal growth.

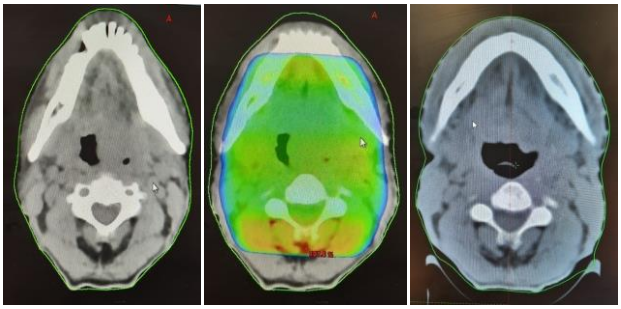

Figure 7: (A) Pre RT disease, (B) radiotherapy plan and (C) Post RT disease after two months.

DISCUSSION

Squamous cell carcinoma contributes in majority to oropharyngeal malignancies, covering nearly 70% of all oropharyngeal malignancies.[10] Sharma et al report ed six cases of primary colonic-type adenocarcinomas of base of tongue.[11-15] It becomes a challenge to predict the origin of adenocarcinoma of tongue i.e., primary or metastatic or of minor salivary gland origin.[16] Metastaic tumour of oral cavity and oropharynx from a systemic primary malignancy are not common, contributing as little as 1%-2% of all oral malignancy.[17] There are various mechanisms proposed for the presence of heterotropic gastrointestinal tissue in tongue latest one supporting the idea that adherent endodermal cells are trapped inside misplaced segments of gastrointestinal mucosa during the infolding of the notochord plate.[18] There are some reports describing oesophageal adenocarcinoma originating from malignant transformation of heterotropic gastrointestinal mucosa.[19] Gastric cancer ranks fourth among all the cancers worldwide and contributes as a second most common cause among all cancer deathsworldwide.[20] Of interest, this patient gave history of occupational exposure to wood dust suggesting possible etiological role as seen among woodworkers who are prone to develop intestinal-type adenocarcinomas.[21] The most common sites of metastasis from gastric carcinoma are liver (48%), peritoneum (32%), lung (15%), bone (12%). Peritoneum is the most common site of metastasis in cases of non-cardia cancer whereas cardia cancer frequently involves lung, nervous system and bones.[22] Cases of synchronous primary neoplasms have been reported in literature. Prakash et al have reported a rare incidence of synchronous double malignancy with oropharyngeal squamous carcinoma and adenocarcinoma stomach.[10] Adenocarcinoma is rarely observed histological entity in head and neck cancers. Vries et al analysed medical records between 1955 and 1985 retrospectively; and could determine only six cases with adenocarcinoma of base of tongue.[23] Eskiizmir et al reported a rare case of primary adenocarcinoma of base of tongue based on morphologic and immunohistochemical evaluations using mono-CEA and AE1/AE3 positivity.[6] Only five cases of gastrointestinal adenocarcinomas with metastasis to tongue have been reported in the English literature till date; 3 from metastatic colorectal adenocarcinoma, 1 from gastric adenocarcinoma and another from pancreatic adenocarcinoma.[24]

In present case, metastatic adenocarcinoma of base of tongue was observed, metastasised from gastric adenocarcinoma showing atypical cells in acinar pattern displaying pleomorphic vesicular nuclei, prominent nucleoli and moderate amount of cytoplasm. Its gastric origin was supported by immunohistochemical analysis of the tissue displaying positivity for CK7 and CDX-2, while it was negative for CK20 (Figure 6A-D).

Patient was managed with radiotherapy, palliative radiotherapy to the gross tumour encompassing the lytic lesions of the vertebrae to a total dose of 20 Gy/5 #s at 4 Gy per fraction over a period of 5 days from a linear accelerator with conventional technique by 6 MV photons from 13 April 2020 to 17 April 2020 (Fig 7A-C). After radiotherapy patient improved in symptoms, (Figure 7C) and showed decrease in size of oroprharyngeal growth.

CONCLUSION

We suggest that follow-up of a patient with gastric adenocarcinoma should include upper GI endoscopy and fibre optic laryngoscopy also for early detection of any possible metastasis. Regular follow up and early

intervention can check metastasis to other site which may improve quality of life and age expectancy of patient.

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