Case Report

Carcinoma buccal mucosa in a treated case of carcinoma cervix: A rare presentation

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ABSTRACT

Second malignancy in an adequately treated cancer is a rare occurrence. Second cancer arising beyond the treated region and its draining lymphatic is even more sporadic. We report a treated case of carcinoma cervix with a metachronous presentation of carcinoma buccal mucosa and provide a brief literature review.

Key words: Buccal mucosa, carcinoma, cervix, metachronous

INTRODUCTION

Carcinoma cervix (Cx) is the second most common cancer among females and the third most common cause of mortality due to cancer in females.[1] The usual treatment of cancer Cx includes surgery and/or pelvic radiotherapy (RT) along with concurrent chemotherapy (CT). Second malignancy occurring in a treated case of cancer Cx is rare and has been reported sporadically in literature.

Presentation of multiple primary tumors can be synchronous (when detected simultaneously) or metachronous (when detected after a variable time interval). Grundmann and Meyer[2] suggested that rising population age and advances in treatment with improved survival from cancer have led to more patients with a second primary tumor. The reasons for these changes may be environmental modifications, genetic predisposition, therapy, or increased surveillance. Awareness, suspicion of multiple primary malignancy, and aggressive diagnostic work up play crucial roles in detection of cancer in earlier stages and can result in a better outcome.[2]

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CASE REPORT

Patient characteristics and chief complaints

A female in her fifth decade presented to our department for postoperative (PO) RT following a wide local excision and left hemimandibulectomy for a cancer of the left buccal mucosa [Figure 1]. At presentation, she was in a fair general condition with an Eastern Cooperative Oncology Group performance status of 1.

History of presenting illness

The patient had a 3 months history of painful and gradually progressive ulceroproliferative growth in her left buccal mucosa with bilateral cervical lymphadenopathy. She had been subjected to a wide local excision of the lesion (modified radical neck dissection type 1) along with left hemimandibulectomy and flap reconstruction. PO histopathological (HP) report was suggestive of a moderately differentiated squamous cell carcinoma (SCC) with cervical lymph node involvement [Figure 2]. Immunohistochemistry study confirmed the diagnosis with a positive staining for cytokeratin [Figure 3].

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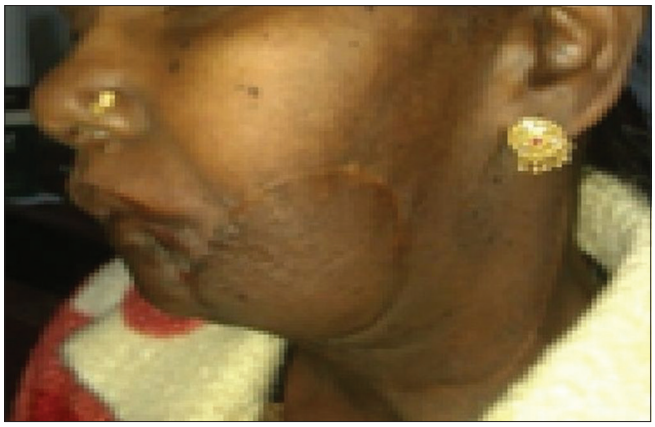

Figure 1: Clinical picture at presentation (postcommando status)

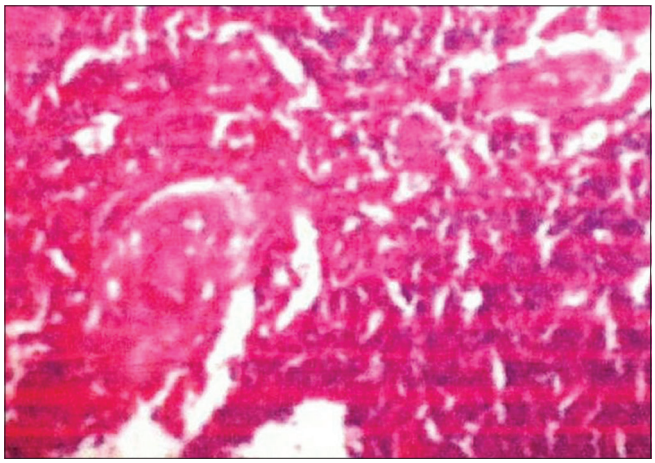

Figure 2: Microphotograph of buccal mucosa lesion showing moderately differentiated squamous cell carcinoma with lymph node involvement

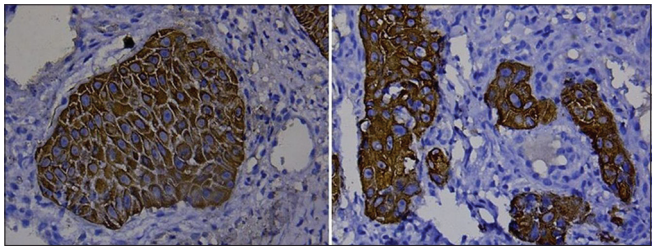

Figure 3: Section showing tumor cells positive for cytokeratin (×400)

Significant history

The patient had a history of SCC of uterine Cx and was treated at our center with subtotal abdominal hysterectomy followed by external beam RT to a total dose of 60 Gy along with concurrent CT injection cisplatin in April 2013.

Course

At presentation, the patient was in a fair general condition. Her examination revealed a PO status with a healthy scar measuring 5 cm × 4 cm. In view of her previously treated cancer Cx status, she was evaluated regarding any associated gynecological finding. She had no symptoms or signs of any discharge or bleeding per vaginum. Detailed history and clinicoradiological examination revealed no finding pertaining to a cancer Cx recurrence. She was therefore designated as a case of a metachronous malignancy in left buccal mucosa. She underwent a computerized tomography scan of the face and neck that revealed a PO status [Figure 4] with Level III enlarged lymph node in the left neck, measuring 21 mm × 18 mm. The left neck subcutaneous plane, left parotid, submandibular gland, and left masseter muscle were bulky with altered attenuation suggestive of PO changes. In view of the HP and imaging findings, she was advised PO RT to the face and neck region using cobalt-60 gamma rays with parallel opposing fields at the rate of 200 cGy/fraction to a total dose of 60 Gy. The patient tolerated the treatment well with Grade 2 skin and mucosal reactions that responded to supportive medications causing no treatment gaps. She presented for follow-up after 1 month of treatment completion and her local examination revealed no evidence of disease.

DISCUSSION

The worldwide annual incidence of cervical cancer is approximately 510,000 new cases with an estimated 288,000 deaths.[3] Cx cancer is ranked as the most frequent cancer in women in India.[4] Approximately 365.71 million Indian women above 15 years of age are at risk of developing cervical cancer, and with an annual incidence of 132,000 new cases and 74,000 deaths, it accounts to nearly one-third of the global cervical cancer deaths.[4]

The phenomenon of multiple primary tumors of different histology, in different organs and at different time interval in same individuals, was first described by Billroth in 1860 and is an important survivor issue in oncology management and long-term follow-up of these cases.[5,6] The incidence of second primary (synchronous or metachronous) tumors is increasing and reported to be as high as 10%.[5] The etiologic implicating factors are first primary tumor itself, persistent environmental carcinogenic influence, genetic predisposition, CT, RT, hormonal therapy, targeted therapy/genetic manipulation, immune suppression and increasingly frequent tissue/organ transplant, and improved survival after first primary tumor.[7]

Synchronous (within 2–6 months of diagnosis of first primary tumor) and metachronous (>6 months after first primary) malignant tumors are an increasingly frequent phenomenon in clinical oncology practice irrespective of geographic and environmental influence and suggest a genetic predisposition or treatment-related factors in malignant disease.[7]

The incidence of second primary and subsequent tumors also appears to be increasing due to better clinical awareness. In the

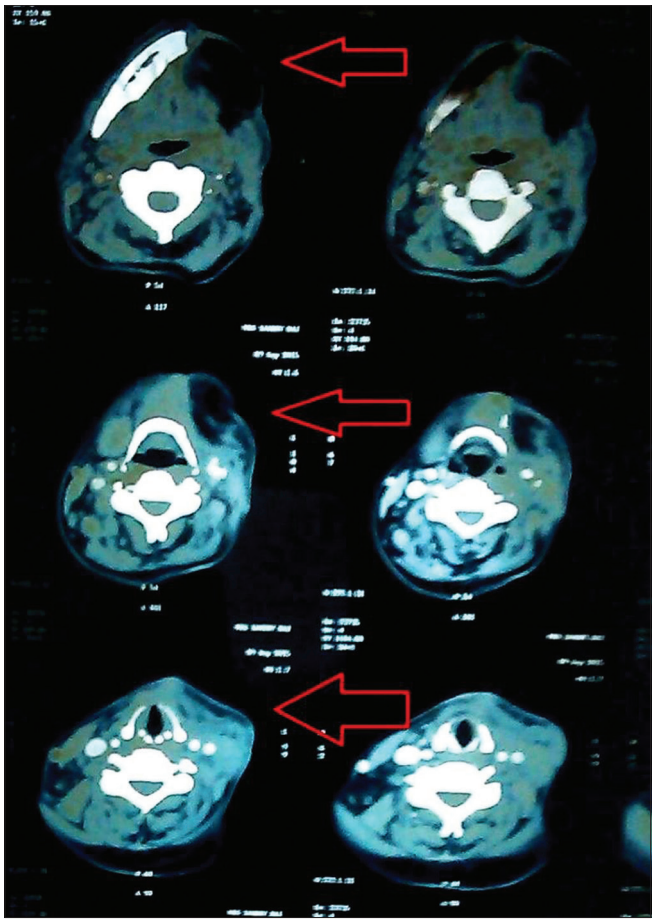

Figure 4: Computerized tomography scan showing postoperative status (red arrows)

surveillance epidemiology and end results analysis (1973-99/2.7 million cases), 10% had reported second tumor.[8] The common synchronous and metachronous tumors seen are lymphoid, hematologic, breast, lung, bone, melanoma, and thyroid and soft tissue sarcomas (post-RT for primary tumor) or CT related that usually develop at site of contact (aerodigestive mucosa), site of absorption (gastrointestinal tract), site of metabolism (liver), and excretion (kidney, lung).[7]

Literature search reveals the association of cancer Cx with a significant excess of cancer lung, urinary bladder as well as other tobacco-related neoplasms as a metachronous presentation.[9-11] A possible causative agent may be the human papilloma virus which is the major identified risk factor for cervical neoplasm and is also related to oral and pharyngeal and, possibly, SCCs from other epithelia.[12,13] Carcinoma of buccal mucosa *per se* happens to be a rare presentation. The definitive management of early stage of oral cavity carcinoma involves surgery[14] followed by adjuvant RT and/or CT depending on the tumor characteristics.

CONCLUSION

With better cancer cure rates, improved survival, and increased patient awareness, metachronous presentation of tumors is increasing. Such an association points toward either an abnormal genetic structure or the role of common etiology for first and second tumors or both. Metachronous presentation in case of primary Cx cancer is sporadically reported. To the best of our knowledge, this is the first reported case of its kind from the Indian subcontinent. We advocate detailed analysis of metachronous tumors to identify risk factors and probable protective interventions for the same.

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Conflicts of interest

There are no conflicts of interest.

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