



Case Report

Pectoralis Major Myocutaneous (PMMC) Flap Donor Site Recurrence in a Case of Buccal Mucosal Cancer: A Case Report

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Received: 07/12/2012

Revised: 03/01/2013

Accepted: 07/01/2013

ABSTRACT

Pectoralis major myocutaneous flap (PMMC) is a robust flap used for reconstruction in head and neck region with minimal complications. Here we would like to report a case of buccal mucosal cancer treated with composite resection and PMMC reconstruction who developed recurrence at donor site and right temporal area supporting implantation theory as mode of spread. We emphasize the necessity to take measures to prevent tumor seedling, include the donor area in radiotherapy field and don't miss to examine the donor site during follow up.

Key words: PMMC flap donor site recurrence, Implantation theory, Buccal mucosal cancer

INTRODUCTION

Most of the oral cancer patients present in an advanced stage in India requiring reconstruction after excision of the malignancy. In head and neck malignancies, Pectoralis major myocutaneous flap (PMMC) is considered as the "work horse" flap for reconstruction of various defects with less amount of complications.

The various complications associated with PMMC flap were extensively described in literature, but the incidence of flap site recurrence is less mentioned. ^(1,2,3) Only few studies have described this complication and most of them had recurrence at the primary site also ^(4,5,6) except one study where they reported two cases of recurrences at donor site with tumor free primary site. ⁽⁷⁾

Here we describe a rare case with recurrence at flap site and temporal area in an operated case of gingivobuccal malignancy without locoregional recurrence supporting the implantation theory.

CASE REPORT

Our case is a 35 year old male who is a chronic tobacco chewer and smoker for 15 years who developed an ulcer over right gingivobuccal mucosa and was diagnosed as squamous cell carcinoma grade 2. He had received one cycle of chemotherapy Cisplatin and 5 FU followed by composite resection (wide excision + right hemimandibulectomy + radical neck dissection) and Pectoralis major myocutaneous (PMMC) flap reconstruction for the defect 2 months back. He was

referred for adjuvant radiotherapy to our institute.

He developed two nodules one at the base of pedicle of PMMC and the other at the right temporal area which were gradually increasing in size for the last 10 days. There was no disease at the primary site or in the

neck (Fig. 1, 2). The diagnosis of implantation metastases was confirmed by fine needle aspiration cytology. The patient was later referred for concurrent chemoradiotherapy because of metastatic lesion at both temporal and PMMC flap site.



Fig.1(a)



Fig.1(b)

Fig.1 (a) - Arrow head showing recurrence at PMMC pedicle flap site and arrow showing recurrence at right temporal area
Fig.1 (b) - Nodule (recurrence) at PMMC flap site

DISCUSSION

The Pectoralis major myocutaneous flap (PMMC) is a reliable technique for transfer of tissue for reconstruction of head and neck defects. Various complications associated with PMMC flap are documented but are less common. (1,2,3)

However, only two cases with recurrent tumor at the base of the pedicle with a tumor free primary site, to the best of our knowledge had been reported. (7) Various routes were described for spread of tumor along myocutaneous flaps like local invasion through tissue planes, blood borne, lymphatic spread and implantation. (4-8) This can be better explained in this patient where there are metastases in temporal area which may be due to implantation of tumor during raising the flap for mandibulectomy.

In our case, in the absence of loco regional recurrence and systemic metastases,

implantation theory may be considered as the route of spread.

We would therefore support the implantation theory (4,6,7) and advise for routine intraoperative measures to prevent tumor seedling like irrigation of wound after surgery, change of instruments and gloves before reconstruction.

And finally, we would like to recommend to include flap site in radiotherapy field to take care of tumor seedling if at all it would have occurred.

CONCLUSION

Tumor seedling is not an unknown fact. Hence necessary precautions like irrigation of the surgical field after surgery, change of gloves, prevention of tumor spillage should be considered to prevent tumor seedling. The donor site may be considered in radiotherapy field and in

further follow up of patients never miss to check at the donor site for any recurrence.

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How to cite this article: Vasu Reddy C, Vijayakumar M, Sabitha KS et. al. Pectoralis major myocutaneous (PMMC) flap donor site recurrence in a case of buccal mucosal cancer: A case report. Int J Health Sci Res. 2013;3(1):55-57.
