

METASTATIC CANCER IN MAXILLA IN A FEMALE PATIENT FROM LUNG – A RARE CASE REPORT

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Article Info

Received 18/10/2016

Revised 25/10/2016

Accepted 30/10/2016

Key words:- Metastatic cancer, Primary cancer, Rare case, Maxilla.

ABSTRACT

Metastatic cancer of oral cavity are uncommon that accounts for about 1-3% of all oral malignant tumors. It can occur both in soft tissue as well as in jawbones. The common metastatic cancer in oral cavity usually have primary cancer in lungs, prostate, thyroid gland, breast and kidney. Here we present a case of metastatic cancer in maxillary molar region which arises from lungs cancer with review of literature.

INTRODUCTION

Metastasis is a Greek word meaning "displacement", from meta, "next", and stasis, "placement". Metastatic cancer of oral cavity are uncommon that accounts for about 1-3% of all oral malignant cancer. It can occur both in soft tissue as well as in jawbones. Metastasis begins with detachment of the cells from the primary cancer site to the distant sites. The common metastatic cancer in oral cavity usually has primary cancer in lungs, prostate, thyroid gland, breast and kidney. In oral cavity the metastatic cancer occurs most commonly in mandibular molar region and rare in soft tissue. The mean age of occurrence for oral metastatic cancer is 54 years, but can occur at any age with a slight male predilection. The pathogenesis of metastatic tumor is unclear, but thought to be multistage process in which the cells are detached from the primary site and transported to the oral cavity through lymph and blood. Most of the metastatic tumor cases in the literature are reported with the known primary cause, but in our case we found the metastatic tumor following which we screened the patient to find a lung cancer. Here we present this interesting case of metastatic cancer of lung.

Case report

A 63 year old female patient reported to the department of oral medicine and radiology with the chief complaint of pain and swelling in her left upper back tooth region for past 2 months (Fig – 1). History reveals that patient underwent extraction 2 months ago following which the pain does not subside, she noticed a swelling which was growing gradually, for which she consulted a dentist and again she undergone extraction in the same region which also not relieved pain and discomfort in that site. Her medical history was noncontributory. On extra oral examination there was a mild facial asymmetry in the left middle third of the face. On intra oral examination the number of teeth present was 24. Missing in relation to 17, 26, 27, 28, 31, 36, 38, 48, and dental caries in 46 and 48. There was a single diffuse swelling in the maxillary left molar region measuring 3 x 3 cm approximately in relation to 27 with non-healing socket covered with pseudomembraneous slough. The swelling extends to buccal and palatal cortical plates, the mucosa covering the swelling appears to be normal with no evident of pus discharge (Fig-2). On palpation the swelling was hard in consistency, tender on palpation. Chair side investigation with fine needle aspiration was done which is negative. With this provisional diagnosis of residual infection or dry socket was considered. Following which the routine radiological investigation was done. IOPA (Fig-3) reveal

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missing of 26 27 and 28 with destruction of cortical bone and destruction of maxillary sinus floor. OPG revealed a hazy radioopaque shadow in the edentulous region of 26, 27 and 28 with loss of normal trabecular pattern and destruction of maxillary sinus floor (Fig-4). With this a radiological diagnosis of malignant lesion in edentulous region of 26, 27 and 28 was considered.

Followed by incisional biopsy was performed under local anesthesia and the specimen obtained was subjected for histopathological examination which revealed, numerous anaplastic epithelioid cells and spindle cells arranged in sheets, nests, finger like and in duct like pattern in a background of cellular connective tissue stroma. Tumor cells show atypical features like nuclear hyperchromatism in few cells, vesicular and granular

nuclei with prominent nucleoli and increased mitotic activity. Few areas shows ductal structures with central necrosis and also few acantholysis cells within the ductal structures. Areas of bony trabeculae are seen focally along with moderate vascularity. The overlying surface epithelium is of parakeratinised stratified squamous type. These features were suggestive of metastatic tumour (Fig-5&6).

Following which the patient was subjected to whole body scan with PET which reveals primary cancer in the lungs. The patient was treated radiotherapy followed by chemotherapy following which the oral lesion regressed and healed normally. The patient is currently under follow up.

Fig 1. Facial profile



Fig 2. Maxilla mirror image



Fig 3. IOPA

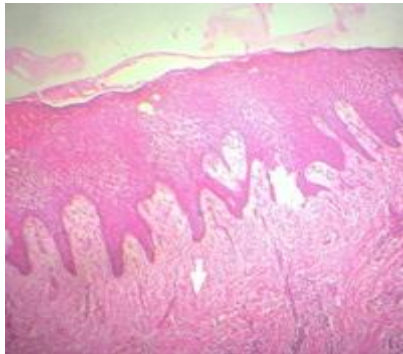


Fig 4. Hazy radioopaque mass in the edentulous region of 26 27 and 28 region with loss of normal trabecular pattern

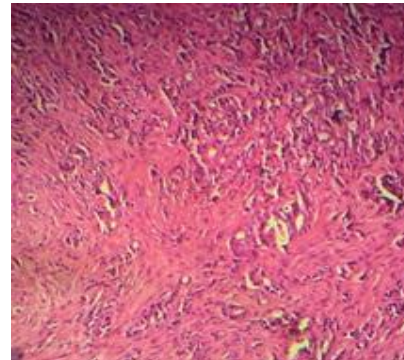


Fig 5 and 6. Numerous anaplastic epithelioid cells and spindle cells arranged in sheets, nests, finger like and in duct like pattern in a background of cellular connective tissue stroma.

10 X



40 X



DISCUSSION

Metastatic tumours of oral cavity are uncommon that accounts for about 1-3% of all oral malignant tumors. Lungs, Breast, prostate, thyroid gland, and kidney tumour usually metastasizes into the oral cavity among which lung cancer is the most common metastatic tumour of oral cavity. Most of the patient with metastatic tumour usually found after identifying primary tumour, in few incidence the metastatic tumour was identified first.¹ In our case the metastatic tumour was identified initially following which the patient subjected for full body scan to identify the primary tumour in the lungs.

Most metastatic tumors of the oro-facial region are seen in patients aged between 40-70 years, male are commonly affected and about 90% of metastatic cancers of the oral cavity occur in the premolar to molar region of the mandible [2]. In our case the age of the patient is 63years female and the site of occurrence was maxillary molar region.

Pathogenesis of metastasis to jaw bones is unclear. Jaw bones have very little red marrow and remnant hematopoietic tissue in the posterior areas may be the site for metastasis. In oral soft tissue, the rich capillary network of chronically inflamed mucosa, especially the gingiva can trap malignant cells. These capillaries contain fragmented basement membrane through which tumour cells can easily penetrate. In our case the involvement is jaw bone.

Hirshberg did an analysis with 56 cases of metastatic tumours and found that the metastatic lesion will be accumulate in the radicular portion of the teeth which causes pain, swelling, loosening of the teeth. In most incidence the clinicians, have extracted the teeth that causes pain following which the metastatic tumour appear and this is considered to be the main symptom for metastatic tumour of the oral cavity [3-5]. In our case also

patient has underwent multiple extractions in the region of the metastatic tumour following the tumour arises.

Metastatic tumour usually does not have an unique radiographic appearance. Generally the radiographic appearance of the metastatic tumour posses no finding to ill-defined radiopaque lesion. In our case also illdefined radiolucent area in extracted site with soft tissue shadow was seen.

The treatment and prognosis of these metastatic tumour is based on the degree of metastasis and the primary tumour. The management include surgical resection, radiotherapy, chemotherapy and combination of these [8]. In our case the patient was treated with radiotherapy and chemotherapy and currently under follow up.

CONCLUSION

To conclude metastatic tumour should be always considered in the differential diagnosis of inflammatory and reactive lesions of oral cavity. Pathologist should be capable to diagnose the metastatic tumour in case it is encountered initially before the identification of the primary tumour.

ACKNOWLEDGEMENT: None

CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

STATEMENT OF HUMAN AND ANIMAL RIGHTS

All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

REFERENCES

1. Meyer I, Shklar G. (1965) Malignant tumors metastatic to the mouth and jaws. *Oral Surg Oral Med Oral Pathol*, 20, 350-62.
2. Zachariades N. (1989) Neoplasms metastatic to the mouth, jaws and surrounding tissues. *J CranioMaxillofac Surg*, 17, 283-90.
3. Hirshberg A, Leibovich P, Buchner A. (1994) Metastatic tumor to the jawbones: Analysis of 390 cases. *J Oral Pathol Med*, 23, 337-41.
4. Hirshberg A, Shnaiderman-Shapiro A, Kaplan I, Berger R. (2008) Metastatic tumours to the oral cavity - pathogenesis and analysis of 673 cases. *Oral Oncol*, 44, 743-52.
5. Hirshberg A, Leibovich P, Buchner A. (1993) Metastases to the oral mucosa: Analysis of 157 cases. *J Oral Pathol Med*, 22, 385-90.
6. van der Waal RI, Buter J, van der Waal I. (2003) Oral metastases: Report of 24 cases. *Br J Oral Maxillofac Surg*, 41, 3-6
7. Whitaker B, Robinson K, Hewan-Lowe K, Budnick S. (1993) Thyroid metastasis to the oral soft tissues: Case report of a diagnostic dilemma. *J Oral Maxillofac Surg*, 5, 588-93.
8. Krishna M. (2010) Diagnosis of metastatic neoplasms: An immunohistochemical approach. *Arch Pathol Lab Med*, 134, 207-15.

