

## Case Report

### Metastatic follicular carcinoma of thyroid in maxilla

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#### ABSTRACT

Metastasis to the oral region is very rare and accounts for less than 1% of oral malignant tumors. Breast, lung, kidney, adrenal, gastro intestinal tract and prostates are most common primary tumors from which metastasis to oral region occur frequently. Metastasis from thyroid gland is extremely rare to oral region. We present an unusual case of metastatic follicular carcinoma of thyroid in maxilla. The significance of this report is that the secondary lesion was the only symptom of the primary tumor and helped us in diagnosis and treatment of disease.

**Key Words:** Follicular carcinoma, maxilla, metastatic tumor, thyroid gland

#### INTRODUCTION

Metastasis is the process of spread of malignant primary tumor by invasion to distant site forming a secondary tumor mass. Metastasis to the oral region is very rare and accounts for less than 1% of oral malignant tumors. [1-3] Breast, lung, kidney, adrenal, gastro intestinal tract, and prostates are most common primary tumors from which metastasis to oral region occurs frequently. [2,4,5]

Metastasis from thyroid glands are extremely rare to oral region though it is one of the most common endocrine malignancies. [4-6] Bone metastasis are found in 1-3% of well-differentiated thyroid carcinomas especially in follicular carcinomas in patients more than 40 years of age. [6,7]

An unusual case of metastatic follicular carcinoma of thyroid in maxilla is presented. The significance of this report is that the secondary lesion was the only symptom of the primary tumor and helped us in diagnosis and treatment of disease.

#### CASE REPORT

A 31-year-old female reported with swelling and mobile teeth in right upper posterior region of maxilla and she had noticed the swelling and mobile teeth 2 months back. The condition gradually increased in severity. After 1 month, she developed a dull pain in 16, radiating to temporomandibular joint, and back of head and neck region.

Examination revealed a firm to bony hard swelling of 2 cm<sup>2</sup> × 1 cm<sup>2</sup> extending from 13 to 17 regions, bi-cortical expansion with more expansion of buccal aspect and mild tenderness on palpation. Teeth associated were mobile with grade-I mobility in 13, 17 and grade-II mobility in 14, 15 and grade-III mobility in 16 [Figure 1].



**Figure 1:** Firm to hard swelling in 13-17 region buccal-cortical expansion (photo taken after incisional biopsy)

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Radiographic examination revealed a well-defined multilocular radiolucency with irregular borders extending from 13 to 17 with root resorption in 16 and root displacement in 15, 17 [Figure 2]. Computed tomography (CT) scan images revealed an expansile mass in the right maxilla causing enlargement and destruction of buccal, palatal cortices and floor of maxillary sinus [Figure 3].

Clinical diagnosis of odontogenic tumor was made. Biopsy was taken and 16 was extracted.

The histopathologic examination revealed well-developed thyroid follicles with abundant periodic acid Schiff (PAS) positive staining colloid material resembling thyroid tissue [Figures 4 and 5]. A diagnosis of metastatic follicular carcinoma of the thyroid was given.

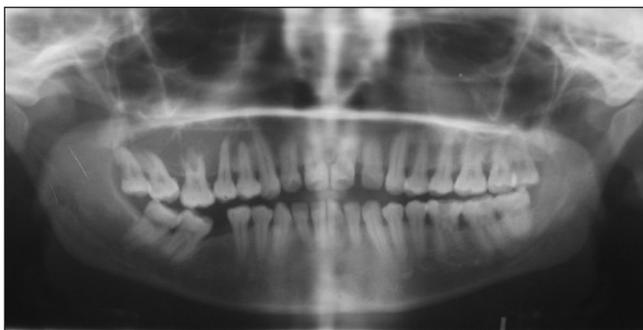
The case was reviewed by the head and neck tumor board. A metastatic work-up was carried out. Ultrasonography of neck showed degeneration of

the left lobe of thyroid gland, and neck examination revealed a multinodular goiter. Fine Needle Aspiration Cytology (FNAC) found to be follicular neoplasm of thyroid and was treated by total thyroidectomy. Excised tissue specimen was histopathologically confirmed as follicular carcinoma of the thyroid.

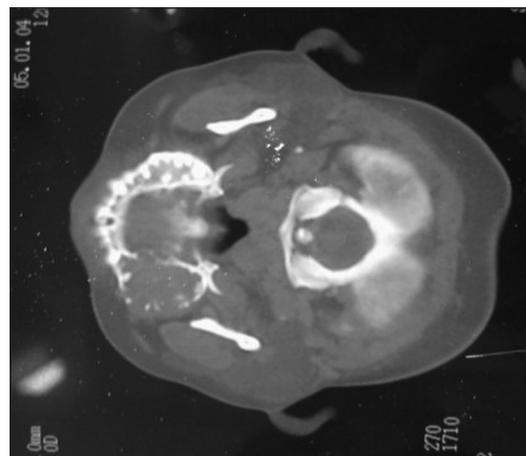
I-131 whole body scan was done to assess metastatic lesions. Metastatic lesions were found in the right maxilla and the right leg and were treated by Iodine radioactive ablation. Patient with follow-up period of 7 years is healthy without any recurrence.

## DISCUSSION

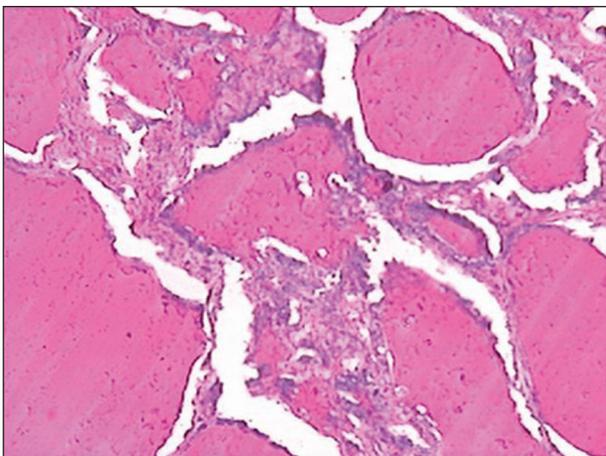
Metastatic tumors in the oral region are extremely rare and constitute lesser than 1% of all oral malignant tumors.<sup>[1-3]</sup> However, exact incidence of metastatic



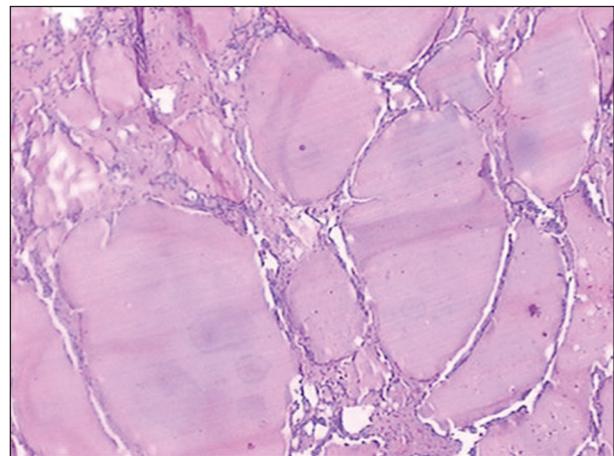
**Figure 2:** Orthopantomograph (OPG) showing radiolucency extending from 13 to 17 regions with 16 root resorption and root displacement in 17, 14



**Figure 3:** Computed tomography (CT) Scan with buccal and lingual cortical resorption and expansion



**Figure 4:** H and E stained tissue section revealed thyroid follicles with colloid materials



**Figure 5:** PAS stained tissue sections shows PAS positively stained colloid materials

tumor deposits in the oral region is not possible as the routine examination for metastatic tumors does not involve the oral cavity region.<sup>[8]</sup>

Usually, breast, lung, kidney, adrenal, gastro intestinal tract and prostates are the most common sites of the primary tumor from which oral region metastasis occurs.<sup>[2,4,5]</sup> Metastasis to jaw bones are more common than soft-tissues especially in the posterior region and more so in mandible than maxilla.<sup>[3,5]</sup>

On some occasions, the presence of metastatic tumor may be the only symptom of an undiscovered primary tumor.<sup>[1,2]</sup> In the oral region, approximately 29-33% is the first sign of the primary tumor.<sup>[2,8]</sup> Clausen and Paulsen had defined certain criteria for diagnosis of metastatic tumor to jaw region.<sup>[8,9]</sup>

Metastasis from thyroid glands are extremely rare to oral region though it is one of the most common endocrine malignancies.<sup>[4-6]</sup> Bone metastasis are found in 1-3% of well-differentiated thyroid carcinomas especially in follicular carcinomas in patients more than 40 years of age.<sup>[6,7]</sup> It accounts for less than 1% of all metastatic tumors to the oral cavity.<sup>[8-11]</sup>

In the present case, we reported a case of metastatic follicular carcinoma of thyroid to posterior maxilla in contrast to a common site of posterior mandible. The age of occurrence of follicular carcinoma is usually above 40 years, in the present case it was below 40 years.

The significance of this case is that the only symptom of the disease was secondary lesion. The diagnosis of secondary lesion helped us in diagnosis and treatment of the primary tumor as well as the secondary tumors.

## CONCLUSION

This case report was presented to emphasize the significance of metastatic tumors in diagnosis of

primary tumors, inclusion of metastatic lesions in the differential diagnosis of jaw lesions, and good patient prognosis with early diagnosis.

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