

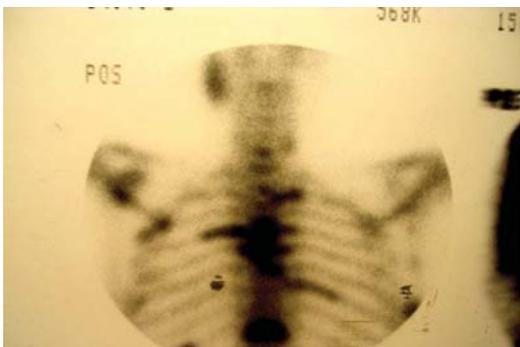
## Photoclinic



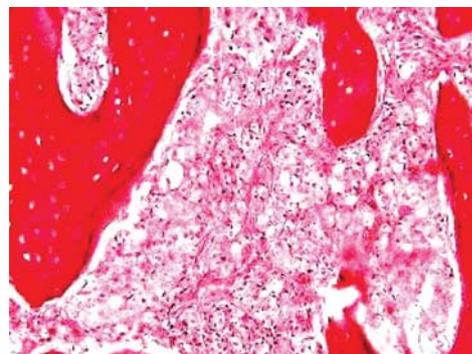
**Figure 1.** Occlusal radiography shows buccal cortex expansion.



**Figure 2.** Bone scan reveals increased uptake in left mandibular body and angle areas.



**Figure 3.** Bone scan shows increased uptake in ribs.



**Figure 4.** Hematoxylin-eosin stain show infiltrated tumoral cells with clear cytoplasm in bony trabecules ( $\times 100$ ).

A 59-year-old man was referred to the department of Oral and Maxillofacial Pathology of Tehran University of Medical Sciences because of a painless swelling in the left mandibular premolar and molar area. The swelling was a hard non-tender fixed mass of approximately  $3.5 \times 3$  cm, which was present for two months. The enlargement caused obvious expansion and asymmetry of the face.

Occlusal radiography showed some evidence of expansion in the buccal cortex but it was nondiagnostic (Figure 1). Therefore, the patient had a computerized tomography (CT) scan, which revealed increasing opacity and irregular periosteal reaction in buccal side. The patient's bone scan revealed several foci of

increased radiotracer uptake in different bones (Figures 2 and 3).

An incisional biopsy of both the hard and soft tissue was taken from the premolar area with local anesthesia. Histopathologic study of the submitted material revealed tumoral cells infiltrated between bone trabecula, especially in perpendicular orientation. The tumor was consisted of individual neoplastic small and large cells arranged between the tumoral nests. Neoplastic cells were eosinophilic but pale staining and foamy cells were also seen. Nuclear hyperchromatism and cellular pleomorphism were also detected (Figure 4).

Fibrous connective tissue was haphazardly distributed between neoplastic islands. Bony projections were found, similar to parallel columns situated perpendicular to the outer surface of the bone.

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**What Is Your Diagnosis?  
See the next page for diagnosis.**

Prostatic carcinoma is the most common non-skin malignancy in elder men, which merits careful consideration.<sup>1</sup> Prostatic adenocarcinomas are composed of small glands that are compact with little or no intervening stroma; less differentiated carcinoma glands fuse together and make a cribriform gland with solid nests of sheets of tumor cells.<sup>1</sup>

One of the most important characteristic features of prostate carcinoma is its ability to metastasize to the skeletal system, inducing osteoblastic reactions in the skeleton.<sup>2</sup>

Prostate carcinoma can spread by direct invasion to contiguous organs or via lymph and blood vessels to distant sites. Metastatic lesions are usually located in the surrounding lymph nodes or distant bony structures, the mandible being the most common.<sup>2,3</sup>

Nearly 1% of all types of oral cancer are metastatic lesions of a primary tumor originating in another part of the body.<sup>4,5</sup> The primary site of the tumor differs among genders. Breast cancer is the most frequent metastatic oral cancer in females, and lung cancer followed by prostate cancer in males.<sup>2-6</sup>

The mandible is the most commonly affected bone, particularly in the molar region.<sup>3,6</sup> Clinical manifestation described by the authors include rapid development of swelling, pain, and paresthesia. Mandibular metastasis of prostate carcinoma most frequently shows radiopaque or mixed radiographic changes. Sometime there is only a radiolucent zone or a complete lack of radiographic evidence.<sup>6</sup>

Mandibular metastasis is the most frequent cancerous lesion, which can mimic dental infections.<sup>4-6</sup> The most frequent

site of mandibular metastasis is the molar area because the hematopoietic sites in the mandible favor early deposit of hematopoietic cells. In the majority of cases, metastasis is found in the extraction site with a latency period of two months between the extraction and development of the metastasis.<sup>6</sup>

Often metastatic jaw lesions are poorly differentiated histologically therefore it is challenging to determine the location of the primary lesion.<sup>4</sup>

In conclusion, mandibular pain occurring in a patient with a history of malignancy gives rise to a possible diagnosis of bone metastasis. Therefore dentists should evaluate these patients who have dental related pain for the possibility of metastatic disease.

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