

# Maxillary sinus metastasis of prostate cancer: A case report

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## ABSTRACT

Prostate cancer progression is commonly manifested by obstructive uropathy, regional lymphatic metastases and hematogenous metastases to axial skeleton. Bone metastases other than the axial skeleton are very rare. Paranasal sinus metastases of prostate cancer are seldom found. This is mostly seen in advanced poorly differentiated prostate cancer. This article presents a case of right maxillary sinus metastasis of prostate cancer treated with palliative radiotherapy. [Turk J Cancer 2006;36(2):79-81].

## KEY WORDS:

Maxilla, prostate cancer, metastasis

## CASE REPORT

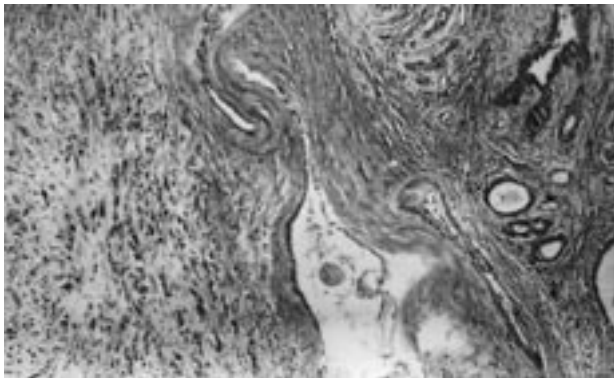
A 69-year-old male presented with lower urinary tract symptoms was referred to our hospital in February 2001. Total serum prostate specific antigen (PSA) value was 10.9 ng/ml. Prostate was 45 cc at transrectal ultrasonographic examination. Pathological examination of the transrectal needle biopsy of the prostate revealed poorly differentiated prostatic adenocarcinoma. Bone scintigraphy showed no sign for metastasis at the time of presentation. Cancer was staged as T4 locally advanced prostate cancer. LHRH analogue was administrated as the initial hormonal treatment. The PSA values were stable for 2 years of follow-up. Two years later the patient presented with PSA progression (83 ng/ml) and urinary retention. Transurethral resection of the prostate (TURP) was performed to relieve his symptoms due to urinary obstruction. Pathological examination revealed adenocarcinoma with Gleason score 5 + 5 TURP in 50% of the sampled prostatic tissue (Figure 1). External beam radiotherapy was applied. PSA value was decreased to 2 ng/ml

Rapid PSA increase up to 250 ng/ml was observed within the next 6 months of follow-up. Anti-androgen treatment (Bicalutamide 50 mg per day) was added to LHRH analogue.

The patient suffered from sensation of maxillary fullness. Computed tomography (CT) of the paranasal sinuses in July 2003 showed a mass obstructing the right maxillary sinus which was regarded as metastasis (Figure 2). A 15

mm metastatic nodule was found in the right lobe of the liver at abdominal CT as well. Bone scintigraphy also demonstrated metastasis to the right maxilla, right clavicle and fourth and sixth lumbar vertebrae.

Maxillary sinus biopsy was performed to identify the origin of the mass. Pathological evaluation revealed poorly differentiated carcinoma in the sinus mucosa. Tumor cells were observed to form small groups or large nests at pathological examination. No obvious glandular formation was determined. Immunohistochemical study revealed diffuse PSA positivity in the described neoplastic cells confirming the metastasis from the prostatic adenocarcinoma (Figure 3).

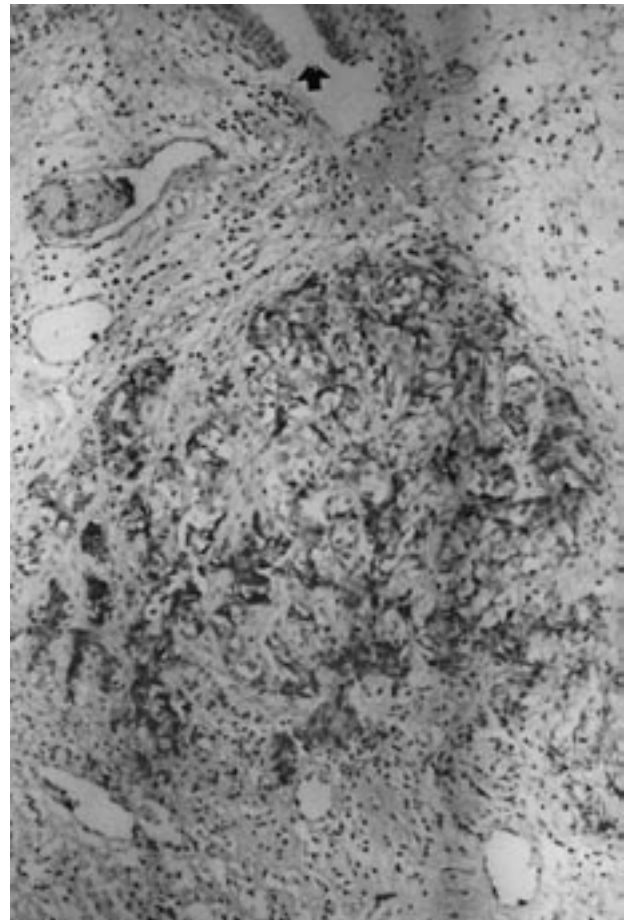


*Fig 1. TURP pathology: Prostatic adenocarcinoma with individually infiltrating cells in the left half of the micrograph (H&E, x28)*



*Fig 2. Maxillary metastasis seen on computed tomography*

Palliative radiotherapy (20 days) to the maxillary region was administered to relieve the symptoms. After radiotherapy, maxillary fullness sensation disappeared. However, PSA progression was continued up to 940 ng/ml within a period of eight months. The patient died with disseminated disease at 32 months after diagnosis.



*Fig 3. Maxillary sinus biopsy: Metastatic neoplastic cells diffusely stained with PSA. Surface epithelium of the sinus mucosa is seen on the right border of the picture (arrow). (Immunohistochemistry, primary anti-PSA antibody, ABC, x28)*

## DISCUSSION

Prostate cancer is the second most common cause of cancer deaths among males. In cases of advanced metastatic prostate carcinoma obstructive uropathy, regional lymph node metastasis and metastasis to axial skeleton may be seen commonly (1). Once it is diagnosed, 30-50% of the disease is not localized to the prostate. The degree of differentiation as Gleason score and the stage are the most important criteria to predict the behavior of the disease.

Paranasal sinuses are not common locations for metastasis of carcinomas including prostate carcinoma (2).

Renal cell carcinoma was reported as the most common cause of metastatic tumor to the paranasal sinuses (3). Paranasal sinus metastases of the prostate cancer is reported in a literature review as 5% of all 123 sinus metastases (3). Prostate carcinoma, which metastasizes to the cranium, is poorly differentiated and has poor prognosis (4). Conveniently, our patient had locally advanced poorly differentiated

carcinoma at the presentation, and PSA relapse and the metastasis occurred in a short period of time under treatment.

In maxillary tumors (primary or metastatic) pain and sensation of fullness are common symptoms as observed in our patient (4).

In maxillary metastasis due to prostate cancer, palliative radiotherapy is a reasonable option which provides significant degree of symptom relief.

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## References

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