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Diplopia as the Initial Manifestation of Metastatic Prostate Adenocarcinoma Due to Sphenoid Bone Metastasis: A Case Report

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Abstract

Background: Skull base metastasis from prostate adenocarcinoma is rare. Case: A 51-year-old male presented with diplopia. MRI showed a left sphenoid wing lesion extending to the cavernous sinus and orbital apex. Histopathology confirmed metastatic adenocarcinoma of prostatic origin. Elevated PSA, prostate biopsy (Gleason 4+3=7) and widespread skeletal metastases established the diagnosis. Bilateral orchidectomy followed by docetaxel and maintenance therapy resulted in marked PSA decline, symptomatic improvement and stable disease.

Keywords

Prostatic Neoplasms; Diplopia; Sphenoid Bone; Skull Base; Neoplasm Metastasis; Cranial Nerve Diseases; Case Reports.

Introduction

Prostate cancer frequently metastasizes to bone; skull base involvement is rare.

Case Presentation

A 51-year-old male presented with blurred vision and diplopia involving the left eye. MRI demonstrated an irregular enhancing lesion involving the left medial sphenoid wing with extension into the cavernous sinus and orbital apex causing compression of adjacent neurovascular structures (Figure 1). Histopathology confirmed metastatic adenocarcinoma of prostatic origin.

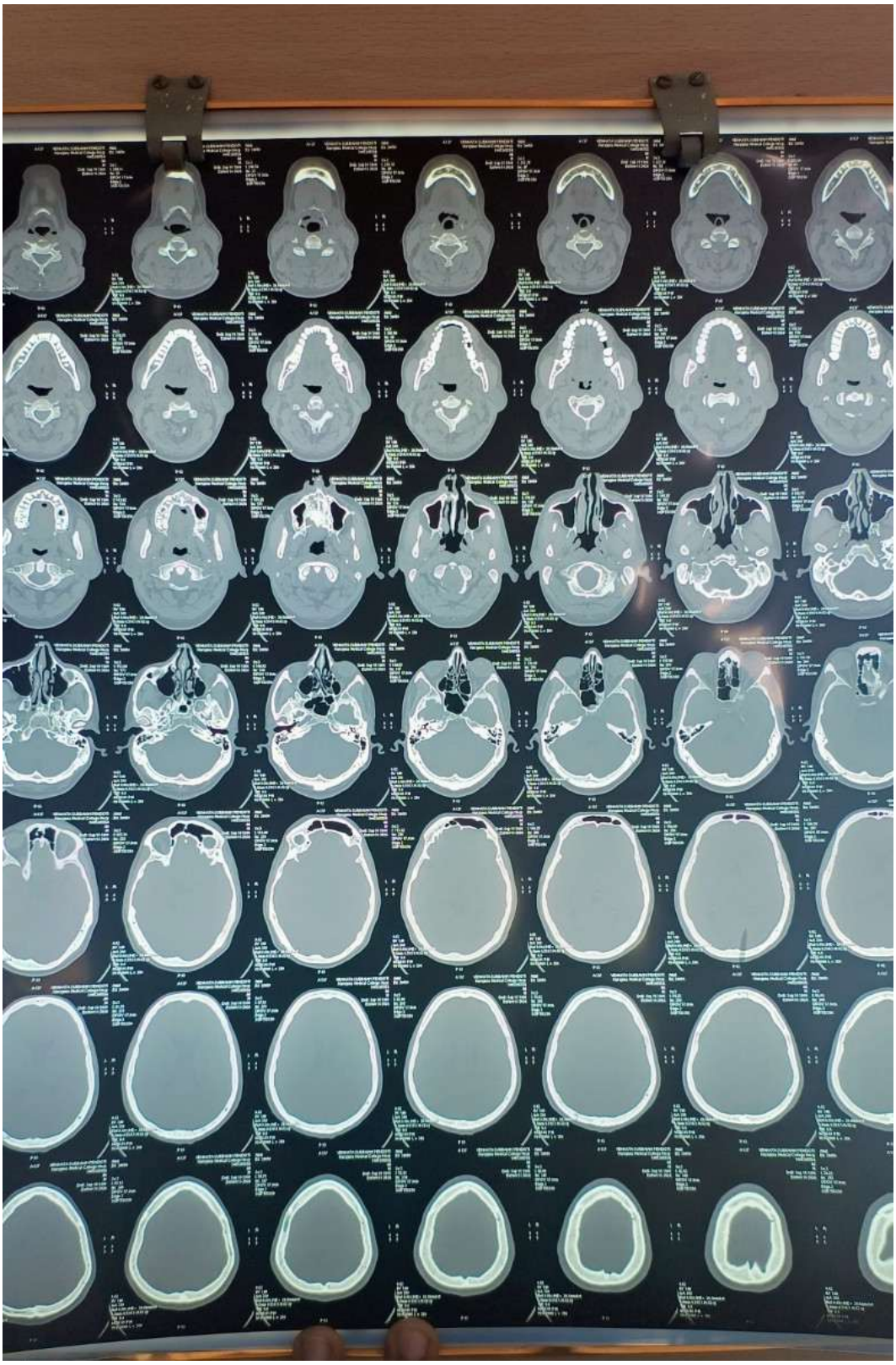

Figure 1. Axial CT images of the skull base demonstrating a destructive lesion involving the left sphenoid wing with extension toward the cavernous sinus and orbital apex, corresponding to the patient's presenting symptom of diplopia.

Treatment and Follow-up

The patient underwent bilateral orchidectomy followed by docetaxel chemotherapy and maintenance androgen receptor pathway inhibitor therapy with significant PSA response and stable disease.

Discussion

Sphenoid bone metastasis is an uncommon manifestation of metastatic prostate adenocarcinoma and should be considered in patients presenting with unexplained cranial neuropathies.

Conclusion

Early recognition of this rare presentation enables prompt diagnosis and multidisciplinary management.

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