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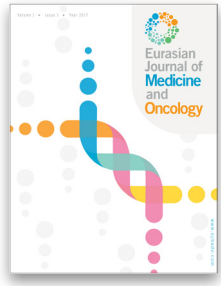

Case Report

Metastasis of Transitional Cell Carcinoma of the Bladder to the Orbit: A Case Report

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Abstract

Presently described is the case of a 67-year-old male patient who presented at the urology clinic with complaints of hematuria and dysuria. Metastases of bladder cancer to the orbit, bilateral lungs, liver, and kidney were discovered. Palliative chemotherapy and radiotherapy for metastatic transitional cell carcinoma of the bladder was initiated.

Keywords: Bladder cancer, orbit, orbital metastasis, transitional cell carcinoma

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Systemic tumors metastasize to the orbit through the bloodstream. The uvea is the most often affected tissue in orbital metastasis. In a case series of 40 patients with iris tumors, it was determined that there was a primary cancer tumor in 70% of the cases. The primary cancer of iris metastases was reported to be most frequently of the breast (40%) and the lung (30%).[1] More rarely, gastrointestinal tract, kidney, endometrial, or prostate cancers develop metastasis to the eye.[2, 3] Extremely rarely, metastasis to the orbit of transitional cell carcinoma (TCC) of the bladder has been reported in the literature. In this case report, a case of orbital metastasis of bladder TCC is described, and a literature review of metastatic TCC to the orbit is provided.

Case Report

A 67-year-old male patient presented at the urology clinic with the complaints of hematuria and dysuria present for the past month. Urinary system examination was normal. Neurological examination revealed a limitation in vision when looking up and decreased visual acuity in the right eye. Urinary ultrasonography revealed bilateral hydronephrosis grade I and masses in the right kidney and at the base of the bladder. Biopsy of the bladder was performed with transurethral resection. Pathological diagnosis was noninvasive, high-grade, transitional carcinoma. Staging was performed with 18F-fludeoxyglucose positron emission tomography/computed tomography (18F-FDG-PET/CT). Hypermetabolic, metastatic, nodular lesions were detected in the liver, the right kidney, and bilateral lungs. Hypermetabolic lesion in the bladder was determined to be the primary tumor using 18-FDG-PET/CT. Renal function impairment had developed due to post renal obstruction. Percutaneous nephrostomy catheter was inserted for the right kidney. Magnetic resonance imaging was performed for the right eye. A mass lesion was observed in the right intraorbital region, extending to the intraconal area and affecting the superior oblique and superior lateral rectus muscles, with a significant indentation of the optic nerve. The lesion was not suitable for biopsy, so it was accepted clinically as ocular metastasis due to invasive bladder can-

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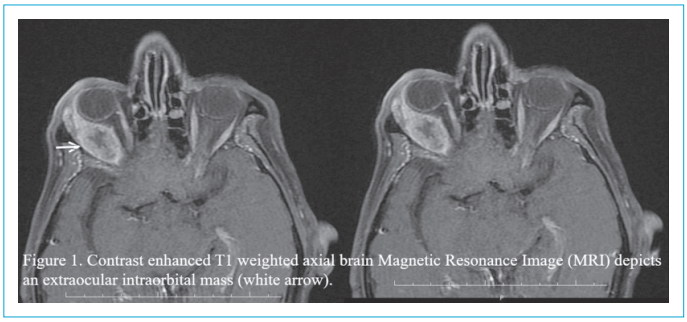

Figure 1. Contrast-enhanced, T1-weighted, axial magnetic resonance image of the brain depicting an extraocular, intraorbital mass (white arrow).

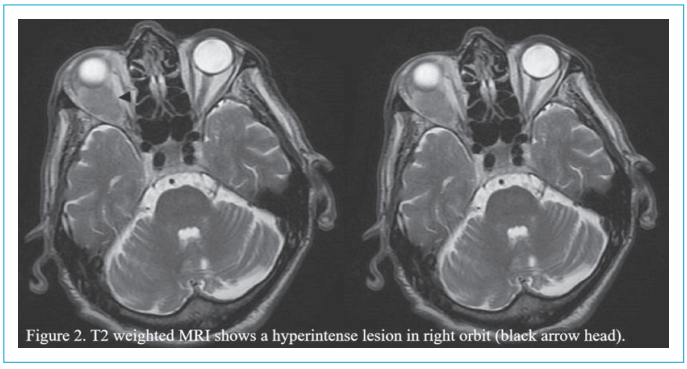

Figure 2. T2-weighted magnetic resonance image revealing a hyperintense lesion in the right orbit (black arrow head).

cer. Palliative chemotherapy and radiotherapy were initiated for metastatic bladder cancer and treatment is ongoing.

Discussion

Orbital metastasis is rare; however, in previously undiagnosed cancer patients, orbital metastasis is the initial presentation in up to 25% of patients with orbital metastatic lesions. Any cancer that can spread via the hematogenous route can metastasize to the orbit and ocular adnexal structures. Breast, lung, and prostate carcinomas, and cutaneous melanoma are the leading causes of orbital metastases. Clinical manifestations of orbital metastases include rapid onset of orbital symptoms, including mass effect with displacement of the globe or proptosis, diplopia, orbital pain, inflammation, and bony destruction.[4] Mass effect causing displacement or proptosis of the globe, inflammation, pain, chemosis, bone involvement, and eyelid swelling can be manifestations of orbital metastases. Diplopia, enophthalmos, or ptosis can be the results of infiltration of soft tissue structures.[5]

Presently described is a patient with urinary and neurological symptoms as initial symptoms of bladder cancer. In our patient, there was limitation to vision when looking up and decreased visual acuity in the right eye as orbital symptoms.

Breast cancer metastasis to the orbit generally occurs in a long latency period after diagnosis of the primary tumor, while orbital metastasis of lung cancer tends to occur early in the disease course.[4] There is limited data on metastatic TCC, and particularly if the initial metastasis site is the orbit. The prognosis in cases of orbital metastasis of TCC is poorer than for more common metastatic tumors of the orbit, such as from the breast.[6, 7]

Treatment of ocular metastasis may include radiotherapy, resection, enucleation, observation, and systemic chemotherapy, or biological therapy.[8]

Conclusion

Transitional cell bladder cancer patients can develop metastases in the orbit and ocular region. The patient in the present case was treated with radiation therapy as the local therapy, and systemic chemotherapy with a combination of cisplatine and gemcitabine.

Disclosures

Peer-review: Externally peer-reviewed.

Conflict of Interest: None declared.

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