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Bilateral Iris Metastases from Prostate Cancer

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Background: Iris metastases of malignant tumors are not common, and most of the cases are unilateral. To our knowledge, there has been no report of bilateral iris tumors metastasized from prostate cancer.

Case: A 71-year-old man with a history of prostate cancer presented with bilateral iris tumors and secondary glaucoma. He had had multiple bone metastases, and had undergone chemotherapy.

Observations: Gray-white fleshy tumors spread in the iris of both eyes. Iridocyclitis and secondary glaucoma were present. After external beam radiotherapy, the iris tumors regressed remarkably in volume.

Conclusions: We observed a rare case of bilateral iris tumors, which had probably metastasized from prostate cancer. The tumors were well controlled with conservative therapies including radiation. We believe this article is the first report of bilateral iris tumors metastasized from prostate cancer. **Jpn J Ophthalmol 2003;47:69–71** © 2003 Japanese Ophthalmological Society

Key Words: Iris metastasis, malignant tumor, prostate cancer, radiation, secondary glaucoma.

Introduction

Malignant metastatic tumors are not common in the uveal tissues,[1,2] and especially infrequent in the iris.[3] We report herewith a case of bilateral iris tumors probably metastasized from previously diagnosed prostate cancer with multiple bone metastases.

A 71-year-old man with complaints of blurred vision and pain in both eyes was referred to our eye clinic. Gray-white fleshy and multi-nodular tumors without apparent superficial vessels spread mainly in the superior portion of the iris of the right eye and in the inferior portion and superior pupillary margin in the iris of the left eye. The pupils were irregularly deformed in both eyes (Figure 1). Iridocyclitis with moderate cells and flare was found in both eyes. Visual acuity was RE 20/40, LE 20/70; intraocular pressure (IOP) was RE 42 mm Hg, LE 13 mm Hg. Corneal edema was found in the right eye; and peripheral anterior synechia of approximately two thirds of the angle existed in both eyes. There were no other remarkable changes in the ocular media and fundus. The prostate cancer had been diagnosed 18 months earlier, and had been classified as stage D2, with multiple bone metastases of bilateral ischium, sacrum, left hip joint, and left humerus found by bone scintigram. The patient had been undergoing chemotherapy (hormone therapy) with 300 mg of fosfestrol and 3.75 mg of leuprorelin acetate per day. The bone metastases had been followed up conservatively. We found neither brain nor central nervous system metastasis on further examination with contrast computed tomograph scans at the patient's first visit to our department.

The iridocyclitis was well controlled with topical 0.1% betamethasone sodium phosphate four times a day. IOP of the right eye, however, was not reduced below 30 mm Hg. Then, external gamma-ray radiation of RE 50 Gy, LE 30 Gy was performed over the

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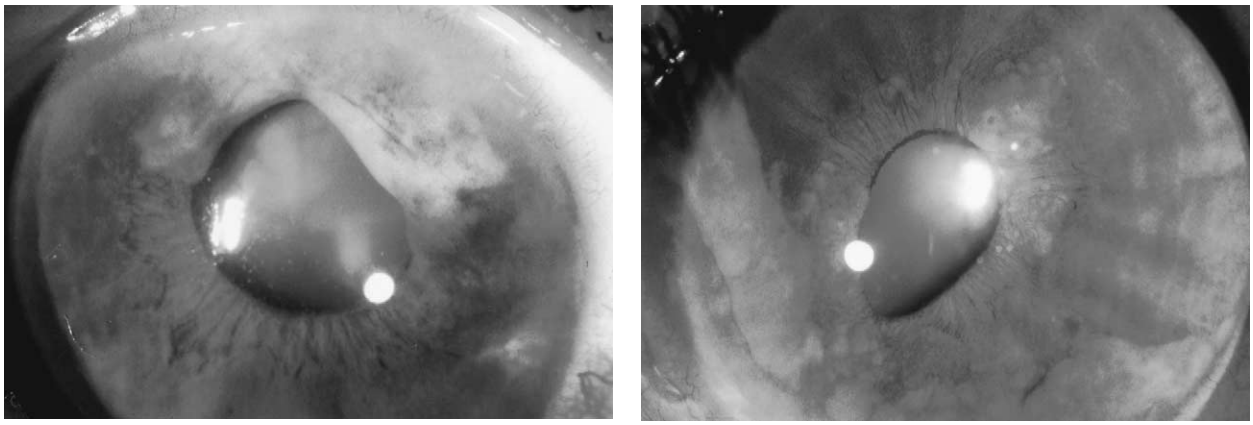

Figure 1. Bilateral iris tumors were observed at the first visit to our clinic by a 71-year-old man with a history of prostate cancer. Left: Gray-white fleshy tumor mainly located in the superior portion of the iris in the right eye. Right: Similar tumor located in the inferior portion and superior papillary margin in the left eye.

next 2 months. After the radiation therapy, the iris tumors apparently regressed in volume in both eyes (Figure 2). IOP in both eyes was controlled below 23 mm Hg with topical 0.5% timolol maleate, 0.05% latanoprost, and 1% dorzolamide hydrochloride, and neither glaucomatous optic disc change nor visual field defect was seen. The patient was followed-up at our outpatient clinic thereafter and no further aggravation of the iris tumors was seen. His visual acuity remained at RE 20/100, LE 20/40, and IOP was RE 22 mm Hg, LE 14 mm Hg on our final ophthalmic examination.

Ten months after being diagnosed with iris metastasis, he was admitted to another hospital with sudden hematemesis and died 2 days later. Therefore, pathological examination was not conducted regarding the bilateral iris tumors.

As the origins of uveal metastasis, breast and lung cancers are most commonly observed, with a ratio of 60% to 90% of all uveal metastasis cases reported. Prostate cancer is the predominant cause of cancer-related death and it frequently metastasizes to bone or orbit. It rarely metastasizes to the uveal tissues and represents only 2% of uveal metastatic cases.[4]

In most of the uveal metastatic cases reported, only unilateral eye was affected. There has been no report of bilateral iris metastases except one case report of bilateral iris metastases from renal cell carcinoma[5] and one case with metastases in the unilateral iris and the contralateral choroid.[6] In the previous report of unilat-

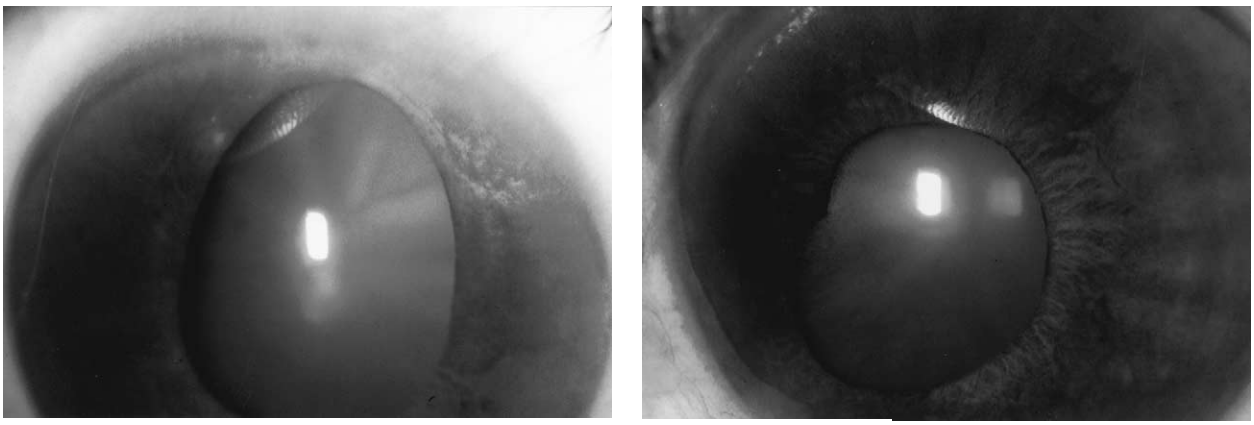

Figure 2. Irises 1 month after radiation therapy. Left: Right eye. Right: Left eye. The iris tumors apparently regressed in volume in both eyes.

eral iris metastasis from prostate cancer, there was no apparent inflammation in the anterior chamber. The present patient had moderate iridocyclitis in both eyes, suggesting variable localization and penetration of the metastatic tumors in the iridial tissue.

Although trabeculectomy or other surgical procedures could have been considered options in this case, surgical approaches had significant risks of scattering malignant cells around the orbit, and the prognosis for a patient with uveal metastasis was expected to be poor.[4] Therefore, we chose conservative therapy. The metastasized iris tumors were well controlled until the patient died suddenly, 10 months after the iris tumors were diagnosed.

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