

# Prostatic carcinoma bilateral iris metastases

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## ABSTRACT

We described a patient with bilateral iris metastases resulted from prostatic cancer. Slit lamp and ultrasonography examination of the both eye demonstrated tumor of the iris, as an amelanotic vascular mass located on the superior temporal quadrant.

On open biopsy revealed undifferentiated tissue that stained strongly positive for prostate carcinoma, confirming the diagnosis of metastasis prostate adenocarcinoma. Early diagnostic procedures are essential for the causal therapy of prostate carcinoma as the primary neoplasm.

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KEY WORDS: iris metastases, prostate carcinoma, diagnosis

## INTRODUCTION

The first case of choroidal metastases of prostate carcinoma was described in 1872. by Perls [1]. The predominant sources of metastatic carcinoma to the choroid are lung in men and breast in women [2]. The iris metastases are uncommon and they represent 12 % of all adult uveal metastases [3]. It is well known that prostatic carcinoma metastases are the most common metastases in the eye, but they are very rare at the iris. Each diagnosis must be viewed with scepticism unless there is histological and if possible histochemical confirmation. Slit lamp examination indicated on iris pseudo tumor or non-specific increasing of tissue [4]. The aim of this manuscript is to represent the case on iris metastases of prostatic cancer with biopsy confirmation that had a strong prostate-specific staining [5].

## CASE REPORT

A 69 years old man was admitted to the Clinic of Ophthalmology, Clinical Centre of Kragujevac in Serbia with the signs of increased intraocular pressure and with inflammation in anterior chamber of both eyes (Figure 1a). Duration of the symptoms was more than one month. Ophthalmological examination showed inflammation in anterior chamber with endothelial precipitates and tumor on the iris. Neoplasm

was located at 11-h on the basis of the iris of right eye and on the 02-h on the basis of the left eye. Gonioscopy showed angle tumor infiltration. Fundus examination was regular. The best corrected visual acuity on the right eye was 10/20, and on the left eye was 18/20. Intraocular pressure measurements were: 42 mm Hg - right eye and 33 mm Hg - left eye. Ultrasonography of the both eyes was regular (Figure 1b). Anamnesis dates showed that patient was treated from prostatic carcinoma by hormonal therapy during the five years. Also, he was examined every year (blood examinations, tumor markers, lung radiography, abdomen ultrasonography, CT of the brain, skeletal scintigraphy). There were no metastases. Later, he was treated with chemotherapy. After urological examination, tumor was detected on digital rectal examination, and the serum prostate-specific antigen level was 126 ng/ml. Prostate biopsy was consistent with adenocarcinoma, Gleason score 8. Hormones therapy was suggested again (Figure 1). Skin metastases were detected and skin biopsy was performed (Figure 1c). Prostate cancer metastases was verified. Patient was treated with medicament antiglaucomatous drugs (carbonic anhydrase inhibitor, beta-blockers, etc) and with corticosteroids. Intraocular pressure was well regulated and pain disappeared. An open biopsy indicates on undifferentiated tissue that stained strongly positive for prostatic-specific acid phosphatase, confirming the diagnosis of metastases of prostatic carcinoma. Immunohistochemical studies were strongly positive for prostatic cancer. The patient was referred to oncologist for detailed prostatic examination. Native graphy indicated for neoplasm of prostate. Later examination showed positive regional lymph nodes. Definitive diagnosis was: Glaucoma sec. Tumor intra bulbare sec. A biopsy of the iris

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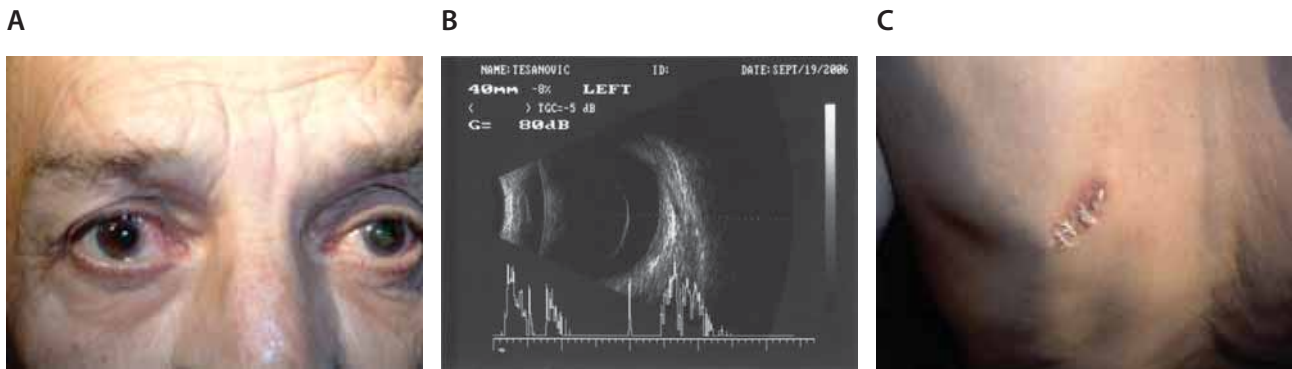


FIGURE 1. Iris metastases of the both eyes (A); Ultrasonography of the left eye (B); Subcutaneous metastases (C);

mass on both eyes showed inflammatory and cellular atypical infiltration strongly positive of prostatic carcinoma staining.

## DISCUSSION

In 12 – 31 % eye metastases are the first sign of cancer disease [1, 2]. The incidence of metastases to the iris among patients with prostate carcinoma has been reported to vary between 8 - 10 % [2]. Prostate carcinoma is the most common primary cancer to cause metastases in the iris [3]. The first sign of prostatic carcinoma can be iris metastases [4]. Diagnosis of this disease entity requires a high clinical suspicion. Our patient complained of the visual loss, eye pain, watering, skin tumors, etc. [5]. He had a positive history with cancer. Ultrasonography, CT and MRI examinations are the modalities of diagnosis [6]. The iris metastases were amelanotic tumors with moderate dilated vessels and in growing to anterior chamber and iridocorneal angle (Figure 1). Inflammatory reaction in the anterior chamber was presented. An excision biopsy remains the gold standard and showed invasive lobular cancer of prostate [7]. Radiography examinations showed thickening in the region of the prostata but no mass lesion. The histopathology report showed positive cavity margins with focal lobular carcinoma in situ. A total prostatectomy was not planned, because of tumor dimension and surround infiltration. Idiopathic iris inflammatory syndrome or iris pseudo tumor may be considered in the differential diagnosis. Later the optimal plaque-radiotherapy was performed [8]. Patient died. Anytime, when ophthalmologist has a patient with unilateral/bilateral painful, red eye with tumor at the iris, the choroidal metastases must be considered through very detailed team- examination with urologists and radiologists [9]. Patients with eye metastases were found to have widespread metastatic disease elsewhere. This is most like to occur in metastatic scirrhous and solid prostate cancer with regional lymphadenopathy and with severe changed fibrotic stroma [10]. Most of these cases respond well to hormonal therapy and local radiotherapy for the metastases. Chemotherapy and hormonal therapy are usually needed for the primary

carcinoma and metastases [11]. Recognizing of metastatic disease and some early treatment are very important to improve quality of life in our patients [11]. The prognosis is very poor, and the mean survival time for patient with prostate cancer was reported to be 1 - 3 years after the diagnosis of eye metastasis and after enucleation or evisceration [12]. Metastases of prostate cancer to the iris are extremely rare. We presented this case to remind ophthalmologists and radiologists of the diagnosis of metastases prostatic carcinoma to the eye and the usefulness of the histochemical staining of biopsy material for prostate-specific stain.

## CONCLUSION

Every ophthalmologist must remember that eye metastases in men showed need for detailed prostate examination as well as the examination of the whole body. The iris and choroidea can be the only metastatic localization of the prostate carcinoma. Planned diagnostic procedures are the base for the optimal causal therapy of prostate carcinoma as the primary neoplasm [13].

## DECLARATION OF INTEREST

Authors declare no conflict or interest.

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