· Case report ·

Medullary thyroid carcinoma with metastasis to iridocorneal angle, a case report

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Received:2010-07-05 Accepted:2010-12-06

Abstract

• AIM: To report a rare case of medullary thyroid carcinoma (MTC) with iridocorneal angle metastasis.

• METHODS: A 28-year-old woman, a known case of sporadic MTC was referred to our hospital due to left eye mass involving iridiocorneal angle. Several months' later retinal evaluation revealed retinal involvement with some patches.

• RESULTS: After palliative laser photocoagulation ablation of the choroidal and angle lesions no signs of recurrence or any new lesion was detected.

• CONCLUSION: As we know this is the first report of MTC with iridocorneal angle metastasis in the literature.

• KEYWORDS: medullary thyroid carcinoma; metastasis; iridocorneal angle; retinal lesions

DOI:10. 3969/j. issn. 1672-5123. 2011. 01. 005

Karkhane R, Zandian M, Pourmostadam B , Rajabi MT. Medullary thyroid carcinoma with metastasis to iridocorneal angle, a case report. *Guoji Yanke Zazhi(Int J Ophthalmol)* 2011;11(1):11-13

INTRODUCTION

Metastatic tumor to the eye is probably the most common type of intraocular malignancy; although many cases are never diagnosed clinically. The choroid is the most common site of involvement, and metastasis to the cilliary body, iris, retina, and optic nerve are considerably less common[1]. The most common anterior segment tumors are primary neuroepithelial cysts, uveal melanoma, metastatic tumors and benign tumors. In the majority of cases the diagnosis can be made by a careful clinical history and ocular examination. Ultrasound examination (low and high frequency) has become an indispensible tool used to determine tumor extension and involvement of surrounding structures, and fine needle aspiration biopsy has been found to be quite helpful in selected cases[2]. Here we report a rare case of medullary thyroid carcinoma(MTC) with iridocorneal angle metastasis.

CASE REPORT

A 28-year-old woman, a well known case of sporadic MTC, was referred to our hospital in November 2006 with an incidental finding of left eye mass involving iridiocorneal angle without any symptoms.

Her medical records showed diagnosis of MTC made at February 2001 presenting as a cervical mass displacing carotid sheath histopatholgically proven to be MTC by biopsy of involved cervical lymph nodes. CT scan also showed right bronchial, subcarinal lymph node involvement, and diffuses nodulointerstitial involvement of lungs. She underwent total thyroidectomy with central neck dissection at March 2001 confirming MTC. She had a course of radioactive iodine therapy to irradicate persistent thyroid tissues, then cervical and mediastinal radiotherapy and adjuvant chemotherapy with cisplatin and dacarbazin initiated. We do not know the exact time of appearance of ocular lesion. In our visit, she denied any history of ocular trauma and inflammation. Best-corrected visual acuity (BCVA) was 10/10 with dry refraction of -3. 5 diopters in right and -3. 25-. 25 ×110° in left eye.

We encountered a solitary, unilateral, dome shaped mass in her left eye that had a rough surface, light brown color and size of 8mm ×10mm. On gonioscopic examination, this vascularized mass filled the anterior chamber angle at 11 o'clock (Figure 1) and obscured the angle structures with no anterior chamber cell or flare. Intraocular pressure was within normal limits in both eyes (14mmHg), relative afferent papillary deficit (RAPD) was absent, and fundoscopic examination was unremarkable. We decided to follow the behavior of the mass in next visits. At the next visit at December 2006 no change in lesion size was detected. At January 2007, size of the mass increased (9mm ×13mm), so that we performed ultrasound biomicroscopic (UBM) examination of the lesion. UBM showed a solid mass in iridiocorneal angle of left eye at 10-11 o'clock with compressive effect on iris, with no extension to posterior structures and cilliary body and with some areas of increased internal reflectivity (Figure 2). In her next follow-up at March 2007, the size of lesion was 10mm ×15mm, and fundoscopic examination revealed multiple yellow choroidal patches in her left eye at superior and inferior nasal arcades. Fluorscein angiography showed hyperfluorescence that appeared in the early arteriolar and arteriovenous phase with progressive and more intense staining in the late phase. By oncologist consult, the patient continued her chemotherapeutic regimen and new radiotherapy session was added. We decided to perform palliative laser photocoagulation ablation of the choroidal and angle lesions. Fine peripheral anterior synechia (PAS) was appeared at laser site. Photographic and ultrasonic documentation was performed before and after treatment. After 9 months follow-up, no evidence of tumor

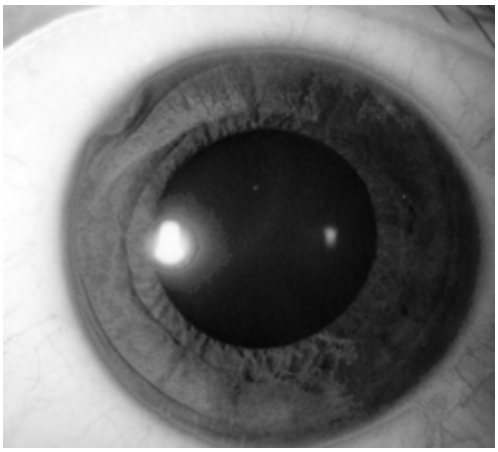

Figure 1 Photograph showing a solitary, unilateral, dome shaped mass in left eye of the patient that has a rough surface, light brown color and a size of 8mm×10mm. On gonioscopic examination, this vascularized mass filled the anterior chamber angle at 11 o'clock and obscured the angle structures.

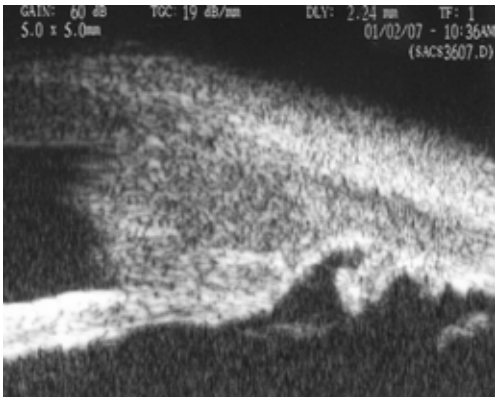

Figure 2 UBM imaging of the lesion showing a solid mass in iridiocorneal angle of left eye at 10-11 o'clock with compressive effect on iris, with no extension to posterior structures and cilliary body and with some areas of increased internal reflectivity.

recurrence and reaction in anterior segment (with gonioscopic and UBM confirmation) was detected. White laser scars of posterior segment lesion were visible with no signs of recurrence or any new lesion.

DISCUSSION

Anterior segment tumors typically originate from the iris and cilliary body and rarely from the cornea or lens. The majority of them are benign iridocilliary cysts[2]. Malignant melanoma is the most frequent primary malignancy in the anterior segment[3]. Uveal metastases are the most common intraocular cancers[4]. Metastasis to the eye most commonly originate from the breast cancer in women and lung cancer in men. The less frequent sites of origin includes the gastrointestinal tract, kidney, thyroid, and testes[2,4,5]. This metastases occur via hematogenous seeding[1].

MTC accounts for 10% of all thyroid neoplasms and has a relatively indolent biological progression, and its distance metastasis occurs late in the course of disease. It occurs in four clinical settings; sporadic cases (as our case) account for 80% of cases; MEN II-A; MEN II-B; and inherited MTC without associated endocrinopathies. Medical history taking and the ophthalmic examination combined with ultrasonography provides enough information to determine the diagnosis and management in the majority of cases of anterior segment tumors[2].

Our case had an ocular metastasis of MTC that involved iridiocorneal angle and in its course had choroidal metastasis. As we reviewed the literature this is the first report of MTC with metastasis to iridiocorneal angle.

There are some general clinical differentiating characteristics between benign and malignant anterior segment tumors. Malignant ones are more likely to be nodular, solitary, larger than 3 mm in size, vascularized, growing, and likely to make structural changes such as uveal ecteropion, iris infiltration, pupillary distortion, cataract and glaucoma, and sentinel vessels can be present in malignant tumors[2,6,7]. Ultrasonography of metastatic tumors typically demonstrate relatively high internal reflectivity and irregular shape[2]. High frequency ultrasonography and fine needle aspiration biopsy (FNAB) are recent innovations that have improved our diagnostic ability and treatment options[2]. FNAB is indicated when less invasive methods can not establish the diagnosis or for a presumed metastatic tumor with an undetectable primary site or when the patient requires histopathologic confirmation to initiate therapy[2,8-11]; so FNAB was not indicated in our case as we knew site of origin.

In general, treatment of anterior segment tumors has trend toward ocular conservation. The trends of treatment include observation and local resection. Enucleation and radiation are typically reserved for large tumors or eyes with untreatable glaucoma. As new modalities of therapy offer lower morbidity when compared with enucleation, more physicians and patients have opted for eye and vision-sparing treatment[2]. We chose observation as the best choice for our patient who had distance nonocular metastasis and poor prognosis who just received palliative laser ablation of lesions.

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甲状腺髓样癌转移至虹膜角膜角1例

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摘要

目的:报告甲状腺髓样癌在虹膜角膜角转移的病例1例。

方法:患者,女,28岁,患有单一的甲状腺髓样癌伴左眼虹膜角膜角包块。随后几个月对其视网膜的随访显示其视网膜也有一些浸润病灶。

结果:用激光照射姑息切除脉络膜及房角病灶后,没有发现有复发迹象和任何新病灶出现。

结论:据我们所知,这是文献中第一次报告甲状腺髓样癌在虹膜角膜角的转移。

关键词:甲状腺髓样癌;转移;虹膜角膜角;视网膜病变

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