Ebstein-Barr Virus-Associated Iris Leiomyosarcoma in an AIDS Patient: A Case Report

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Abstract


Observations: A 19-year-old AIDS patient presented with a painless rapidly growing mass in the right iris. EBV-associated leiomyosarcoma was confirmed by an immunohistochemical study of the excisional biopsy.

Conclusion: This is the second case report on immunohistochemically proven EBV-associated iris leiomyosarcoma in AIDS.

Keywords: Human immunodeficiency virus (HIV); Acquired immunodeficiency syndrome (AIDS); Iris tumor; Ebstein-Barr virus; Leiomyosarcoma

Introduction

AIDS patients have an increased susceptibility to develop multiple malignant neoplasms. The association between leiomyosarcoma and EBV in AIDS is widely recognized [1]. The sarcoma commonly occurs in gastrointestinal tract, uterus and lungs [1]. Less commonly, it can also involve liver, spleen, adrenal gland, lesser sphenoidal wing, cavernous sinus, and orbit [2,3]. However, leiomyosarcoma rarely occurs in the uveal tract. There has been only one case report of EBV-associated iris leiomyosarcoma in the English literature [4]. We are reporting another AIDS patient with EBV-associated iris leiomyosarcoma.

Case Report

A 19-year-old Thai male developed a painless iris mass in the right eye 2 months previously. He has been suffering from vertically transmitted AIDS for 10 years. The most recent CD4 count was 4 cells/mm³. He was currently taking Isoniazid, Pyrazinamide, Levofloxacin, and Cycloserine for active pulmonary tuberculosis.

Best corrected visual acuity was 20/150 OD and 20/80 OS. Slit-lamp biomicroscopy in the left eye revealed an oval demarcated yellowish iris mass with 3.6 mm horizontal diameter and 4.7 mm vertical diameter extending from 4:00 to 7:00 o’clock positions with engorged and tortuous limbal vessels traversing across the tumor surface into the anterior chamber (Figure 1A). Slit-lamp biomicroscopy in the left was unremarkable. Dilated ophthalmoscopy revealed inactive CMV retinitis confined in the posterior pole OU. Gonioscopy showed a large iris mass extending from four to seven o’clock positions obscuring the anterior chamber angle view. Fiber-optic limbal transillumination fail to demonstrate ciliary body shadow. Since the tumor confined in the iris tissue only without ciliary body extension, a sectoral iridectomy was performed removing the entire iris mass. There was minimal intraoperative hemorrhage. The diagnosis of iris leiomyosarcoma was established. There has been no tumor recurrence during 1 year follow up. Visual acuity improved but limited to 20/80 OD due to CMV retinitis.

Comment

Iris leiomyosarcoma is an extremely rare malignant tumor [4-6]. It arises from the dilator and sphincter muscles, which are of neuroectoderm in origin. Ebstein-Barr virus has been intimately associated, though not necessarily in a causal fashion, with multiple malignancies in AIDS including Burkitt’s lymphoma, nasopharyngeal carcinoma, Hodgkin’s disease, B-cell lymphomas [1], and leiomyosarcoma [4,5,7,8].
Since there may be transitional cells in between melanocytes and smooth muscles, histological differentiation of leiomyoma/leiomyosarcoma from amelanotic spindle cell melanoma is difficult without electron microscopy and immunohistochemical studies. Foss et al. [6] had shown 24 cases that had been initially diagnosed for smooth muscle origin were all melanocytic neoplasms when studied with appropriate immunohistochemical studies. Due to lightly pigmented nature of the tumor, transillumination defects may be difficult to determine tumor extension. Fluorescein angiography has suggested a valuable tool to establish the extension of the tumor [11].

Although several cases of iris leiomyosarcoma have been reported in the literature, only one was proved to have EBV-associated leiomyosarcoma by immunohistochemical studies [4,9]. Our patient is the second case report with immunohistochemically proven EBV associated iris leiomyosarcoma. Our patient was fifteen years older than the previous case. Serial slit-lamp photography documented a hundred percent enlargement of the tumor dimension within two months. Although the iris mass in our patient was much larger than that of the previous patient, it was surprisingly quiet and minimally disturbed the patient. Both of them shared a common feature of having a very low CD4 count, which might favor the tendency of this condition to occur in a severely compromised host.

References