· Case report ·

Intraocular lymphoid infiltration as relapse of non-Hodgkin's lymphoma

Zsuzsanna Szijártò [1], *Árpád Szomor*[2]

[1]Department of Ophthalmology, University of Pécs, Medical School, Hungary
[2]First Department of Internal Medicine, University of Pécs, Medical School, Hungary
Correspondence to: Zsuzsanna Szijártò. Department of Ophthalmology, University of Pécs, Medical School, Hungary. zsuzsanna. szijarto@ aok. pte. hu
Received:2010-05-10 Accepted:2010-10-18

Abstract

• A 60 years old female with a 4 years history of recovered non-Hodgkin's lymphoma(NHL) complained about vision loss on her right eye. There were floating cells in the anterior chamber and the vitreous cavity; and choroidal infiltration was detected on her right eye as a relapse of lymphoma. Some weeks later a magnetic resonance imaging of the brain revealed also an intracranial tumor and systemic chemotherapy started. Intraocular infiltration is an extremely rare form of relapse of NHL.

• KEYWORDS: intraocular lymphoid infiltration; non-Hodgkin's lymphoma; relapse
DOI:10. 3969/j. issn. 1672-5123. 2010. 11. 005

Szijártò Z, Szomor Á. Intraocular lymphoid infiltration as relapse of non-Hodgkin's lymphoma. *Int J Ophthalmol (Guoji Yanke Zazhi)* 2010;10(11):2060-2061

INTRODUCTION

Infiltration of the uvea, retina, vitreous, or optic disk by malignant lymphoid cells generally occurs in patients with non-Hodgkin's lymphoma (NHL)[1]. Two clinically distinct forms of NHL, systemic NHL and NHL of the central nervous system (NHL-CNS), also can affect the eye[2-4]. Systemic NHL invades the uveal tract secondarily via the hematogenous route, systemic findings usually antedate the ocular findings[4,5]. Intraocular involvement is more frequent with NHL-CNS[2]. This lymphoma arises from the malignant transformation of lymphoid cells in the CNS[5,6]. Primary intraocular lymphoma is a subset of NHL-CNS in which malignant cells involve the retina, vitreous or optic nerve with or without concomitant CNS involvement[7]. Intraocular lymphoma may be the initial sign of NHL-CNS[2,8]. Relapse of NHL as choroidal infiltration is extremely rare disease, only 1 case found in the literature[9].

CASE REPORT

A 60 years old female with a 4 years history of healed systemic diffuse large B-cell (DLCL) NHL complained about vision loss on her right eye. Her primary NHL was treated with cyclophosphamide, mitoxantrone, vincristine, metylprednisone and monoclonal anti-CD20 combination. Complete remission was reached and no more treatment was adjusted. Four weeks before her ocular complaints, total body fluorodeoxyglucose positron emission tomography combined with computed tomography scan (PET-CT) did not show alteration. She was admitted to the department of Ophthalmology, University of Pécs, because of blurred vision on her right eye. She percepted light from 3 meters distance, there were floating cells in the anterior chamber and in the vitreous cavity. Choroidal infiltration was detected on her right eye around the optic nerve and on the posterior pole (Figure 1). Fluorescent angiography showed also infiltration around the optic nerve, diffuse choroidal flush at the posterior pole, and subretinal infiltration at the macular area. Left eye did not show any alteration. Nuclear magnetic resonance imaging (MRI) 2 weeks after the ophthalmologist's examination revealed an intracranial infiltration (30mm × 26mm × 10mm sized) at the corpus callosum without any symptoms. Liquor sample proved relapse of the original lymphoma. Other examinations (abdominal ultrasonography, chest CT, labor results) did not show abnormal results. A high dose ($3g/m^2$) methotrexate based chemotherapy was started combined with carmustin, teniposide and metylprednisone. Intrathecal chemotherapy was simultaneously administered. The patient refused the recommended whole-brain irradiation.

Two weeks after the beginning of chemotherapy, the infiltration of the affected eye disappeared. Retinal vessels attenuated, optic nerve became atrophic, and visual acuity could not improve. Fifteen weeks after the diagnosis of NHL relapse the patient had light perception on her affected eye from 20 centimeters distance, optic nerve head was atrophic, retinal vessels occluded (Figure 2). MRI, performed 18 weeks after diagnosis, showed regression of the intracranial infiltration without sign of active tumor. The patient is well 4 years after the finished chemotherapy protocols.

DISCUSSION

Intraocular lymphoid infiltration from NHL generally occurs in older people[1,2,4], although it has been reported in a patient as young as 3 years[10]. The disease seems to be more common among females, and it typically affects both eyes, although the onset and extent of involvement may vary[1,4]. Infiltration can present with vitreous cells, yellow infiltration at the level of the retinal pigment epithelium, focal or diffuse uveal tumors, or optic nerve involvement[2,5]. Other less common manifestations are retinal vasculitis, central retinal artery

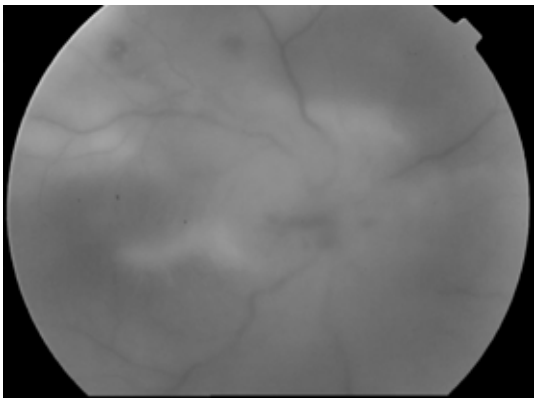

Figure 1 Choroidal infiltration around the optic nerve and on the posterior pole.

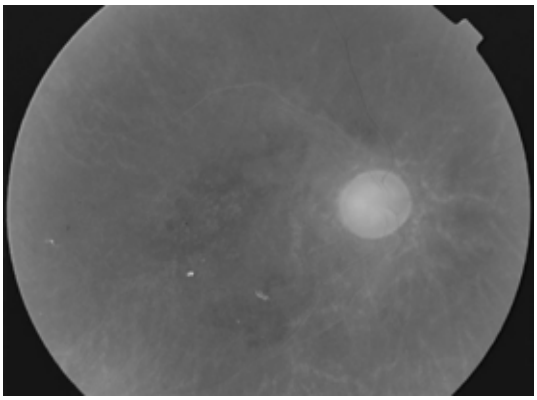

Figure 2 Infiltration disappeared 15 weeks after the start of chemotherapy.

obstruction, solitary lesions resembling acute retinal necrosis, and secondary glaucoma[4]. Patients with systemic NHL are more likely to have uveal infiltration, whereas those with NHL-CNS generally present with vitreous infiltration[5]. In patients with advanced disease, these two types of ocular involvement may overlap[1]. In patients with systemic NHL, the extent of intraocular involvement and visual loss seems to parallel the severity of systemic disease. Our 60 years old female patient with history of recovered systemic NHL had both choroidal and vitreous infiltration, without other relapse sign at her first visit. The disease progressed very quickly, 10 weeks after the negative PET-CT, MRI which showed CNS relapse. The prognosis in patients with intraocular involvement from NHL is poor. A patient with ocular relapse of NHL, died 1 month after diagnose of CNS relapse because of disease progression[9]. Our patient is well 4 years after the intraocular relapse of NHL.

REFERENCES

1 Shields JA, Shields CL. Intraocular Tumors: A Text and Atlas Saunders, Philadelphia

2 Freeman LN, Schachat AP, Knox DL. Clinical features, laboratory investigations, and survival in ocular reticulum cell sarcoma. *Ophthalmology* 1987;94:1631-1639

3 Lewis H, Schachat AP. Non-Hodgkin's (reticulum cell) lymphoma. In: Ryan SJ, Ogden TE, Schachat AP. Editors, Retina, Vol. 1 Mosby, St. Louis 1994:893-902

4 Merchant A, Foster CS. Primary intraocular lymphoma. *Int Ophthalmol Clin* 1997;37:101-115

5 Fredrick DR, Char DH, Ljung BM, Brinton DA. Solitary intraocular lymphoma as an initial presentation of widespread disease. *Arch Ophthalmol* 1989;107:395-397

6 Hochberg FH, Miller DC. Primary central nervous system lymphoma. *J Neurosurg* 1988;68:835-853

7 Chan CC, Buggage RR, Nusseblatt RB. Intraocular lymphoma. *Curr Opin Ophthalmol* 2002;13:411-8. Review

8 Buettner H, Bolling JP. Intravitreal large-cell lymphoma. *Mayo Clin Proc* 1993;68:1011-1015

9 Ferrari A, Luppi M, Lazzerini A, Potenza L, Cavallini GM, Torelli G. Ocular involvement as first sign of isolated CNS relapse in diffuse large B-cell lymphoma The Lancet Oncology 2006;7:274

10 Wender A, Adar A, Maor E, Yassur Y. Primary B-cell lymphoma of the eyes and brain in a 3-year-old boy. *Arch Ophthalmol* 1994;112:450-451

非霍奇金淋巴瘤复发先兆-眼内淋巴浸润

Zsuzsanna Szijártò [1], Árpád Szomor[2]
(作者单位:匈牙利佩奇市,佩奇大学医学院[1]眼科;[2]第一内科)
通讯作者:Zsuzsanna Szijártó. zsuzsanna. szijarto @ aok. pte. hu

摘要

女性患者1例,60岁,4a前患有非霍奇金淋巴瘤,康复后主诉右眼视力丧失。检查发现前房和玻璃体有浮游细胞及脉络膜浸润表明淋巴病复发。数周后的脑磁共振成像显示有颅内肿瘤浸润,而后进行了全身化疗开始,眼内浸润是非霍奇金淋巴瘤复发的极为罕见的形式。

关键词:眼内淋巴浸润;非霍奇金淋巴瘤;复发