Palpebral mantle cell lymphoma: literature review and case report

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| Summary

Introduction: Mantle cell lymphoma usually occurs in lymph nodes and bone marrow, and sometimes it can also be present in peripheral blood. In rare cases, extranodal lesions can be detected, but mainly as gastrointestinal polyposis. **Case report:** A 79-year-old man with a gritty feeling on both eyelids of one year and one month duration. The patient developed visual acuity loss and bilateral upper eyelid masses. The biopsy from March 2013 indicated an immunophenotype B non Hodgkin lymphoma and computed tomography had shown impaired lungs and spleen. The patient underwent six cycles of RCHOP until complete remission of the disease on February 2014. **Conclusion:** immunohistochemical study and description of pathologycal biopsy have major importance to confirm the diagnosis of mantle cell lymphoma. Moreover, staging the disease is very important not only to assess prognosis but also to establish the most appropriate therapy.

| Keywords

Mantle-Cell Lymphoma, Ocular Adnexal Lymphoma; Non-Hodgkin Lymphoma; Case Reports; Eyelid Neoplasms

| Introduction

Lymphoproliferations of the eye, including intraocular and ocular adnexal non-Hodgkin lymphoma (NHL), constitute a heterogeneous group of neoplasms that represent less than 1% of all NHLs and 5% to 15% of all extranodal sites (1-3). Most of these lesions are marginal zone B-cell lymphoma or mucosa-associated lymphoid tissue (MALT) lymphoma, diffuse large B-cell Lymphoma and follicular lymphoma. There are some rare subtypes such as lymphoplasmacytic, mantle-cell lymphoma, plasmacytoma, and immunoblastic lymphoma, listed in decreased frequency (4).

Mantle-cell lymphoma (MCL) usually occurs in lymph nodes and bone marrow, with or without blood related problems. There are some rare reports of ocular adnexa impairment, representing 1-5% of the primary ocular adnexa lymphomas (5).

MCL are composed by small and medium size lymphoid cells that can be seen in three different patterns: diffuse, nodular or mantle zone. MCL incidence is significantly higher in men, in Caucasians, and patients in their sixties and seventies (7). It has slow progression, and most patients are diagnosed with late-stage MCL, with disseminated disease at lymph nodes, spleen, gastrointestinal tract, extra nodes sites and waldeyer ring, with a median survival of 3-5 years (8).

Immunostaining for p53 protein can be detected (3), 90% of the MCL patients have an over expression of cyclin-D1 protein (9) and also a frequent t(11;14)(q13;q32) translocation related to the expression of the gene CCND1 (10). Whenever the cyclin D1 immunostaining is negative, SOX11 protein can be a reliable marker for diagnosis (11.)

| Objective

The objective of this paper is to report a rare case of a bilateral eyelid mantle-cell lymphoma in a patient admitted to the Hematology service from Hospital Estadual Mario Covas, Santo André-SP, Brazil.

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| Case Report

A 79-year-old male presented with gritty feeling in both eyelids of one year and one month duration. The complaints further aggravated by painful swelling and lacrimation (Figure-1). By the time he arrived at the hematology service he had lost his vision acuity.

On March 2013 his left eyelid was biopsied and its histopathological examination showed an atypical lymphoid hyperplasia. Immunohistochemical studies show that the neoplastic cells are expressing Bcl-2, CD5, CD20, CD43, and cyclin-D1. They are negative for AE1/AE3, CD3, CD10, CD23, and CD30. Ki-67 is performed for evaluation of the mitotic index, which highlights 20–30 percent of the neoplastic cells. That in conclusion, classified as mantle-cell lymphoma.

Computerized tomography scan of chest and abdomen revealed evidence of parenchyma lung and spleen involvement. Bone marrow biopsy showed diffuse lymphocytic infiltration with 70% cellularity. The patient was treated with 6 cycles of chemotherapy: rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone (R CHOP) from October 2013 to February 2014 (Figure-2). Patient has remained in complete clinical remission until now.

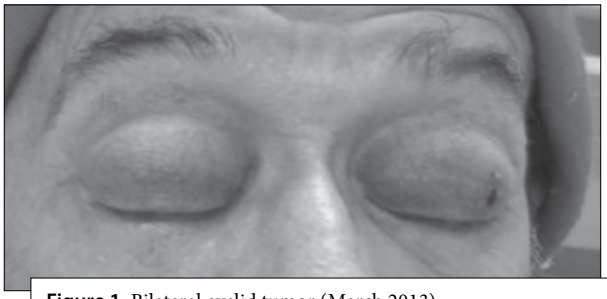

Figure 1. Bilateral eyelid tumor (March 2013).

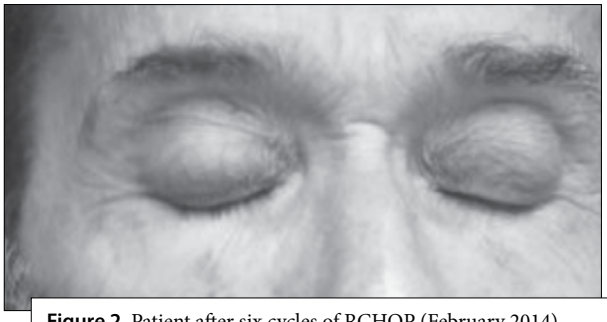

Figure 2. Patient after six cycles of RCHOP (February 2014).

Table 1. Comparison of eyelid MCL case presentations

	Albuquerque et al., Brasil 2006	Khojeini et al., EUA 2013	Medrado et al., Brasil 2013	Matushita et al., Brasil 2014
Patient	62 year male	78 years male	73 years male	79 years male
Chief complaint	Superior bilateral eyelid tumor with burning feeling and pain of four month duration.	Inferior bilateral eyelid tumor of twelve months duration. Solid and eritamatous masses and pain from palpation.	Inferior and superior bilateral eyelid tumor o fone year and six months duration. Painless.	Inferior and superior eyelid tumor with pain from palpation of one year and one moth duration.
Visual changes	Ocular extrinsic control mobility impairment, punctate keratitis ++/4.	Patient denies decrease of viasual acuity, photophobia, buring feeling or diplopia.	Decrease of visual acuity, bulging and eyelid proptosis	Loss of visual acuity, lacrimation, gritty feeling on the eyes.
Immuno-hystochemical	CD5+,CD20+, cyclineD1+, CD23-, CD10-.	Bcl-2+, CD5+, CD20+, CD43+, cyclineD1+, CD3, CD10-, CD23-, CD30-, AE1/AE3-	CD5+, CD20+, cyclineD1+	CD20+, BCL-2+, cyclineD1+, ki67 30%, CD3-, CD5-, CD10-
Treatment	Chemotherapy (cyclophosphamide, vincristine and prednisone), 4 cycles of Hyper CVAD and bone marrow transplant.	Not reported	Chemotherapy: 3 cycles of CHOP and 6 cycles of FCR	Chemotheraphy: 6 cycles of RCHOP with granulokine during 5 days after the end of the RCHOP.

Abbreviation: RCHOP (rituximab, cyclophosphamide,doxorubicin, vincristine e prednisone), FCR (Fludarabine, Cyclof\phosphamide, Rituximab) Hyper CVAD (cyclophosphamide, doxorubicin, vincristine, dexametasone, mesna, methotrexate, leucovorin and citarabine).

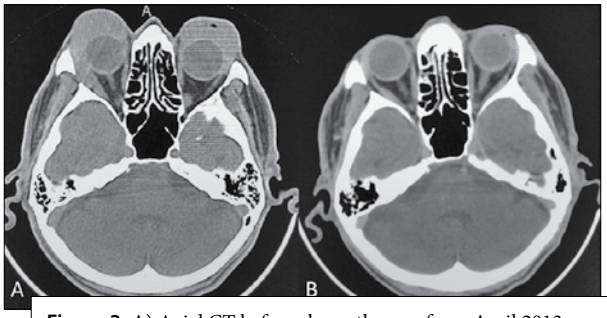

Figure 3. A) Axial CT before chemotherapy from April 2013. B) Axial CT after chemotherapy from March 2014.

| Discussion

Pathologies such as inflamatory pseudotumor and reactional lymphoid hyperplasia are more frequent in the ocular region, making the orbital lymphoma's diagnosis more difficult. The clinical presentation and the radiologic characteristics are very similar to other neoplasm once these diseases have proptosis and swelling, with or without pain. They also might present exophthalmia, loss of the visual acuity, dacryocystitis, lacrimation and diplopia. Our patient presented with all these signs and symptoms.

The immunohystochemical study associated with the anatomopathologycal report from the biopsy is very important for the confirmation of the diagnosis (12).

Furthermore, staging the patient is decisive to evaluate the prognosis and establish the therapeutic regimen.

Johnson et al, observed 77 patients with ocular adnexa lymphoma and concluded that eyelid lesions frequently evolve to disseminated lymphomas, while conjunctival lymphomas are usually local (13). Our patient presented with eyelid lymphoma in an advanced stage.

There are only a few cases of eyelid MCL described in the medical literature, once these disease manifestations are very rare (Table 1).

The combination of chemotherapies, rituximab and bone marrow transplant is one of the best therapeutic regimen for MCL, evidenced by Looietal et al. (14) and Rasmussen et al (7). Our patient underwent six RCHOP cycles (rituximab, cyclophosphamide, doxorubicine, vincristine and prednisone) associated with 5 days of post-chemotherapy granulokine. He completed in remission of the disease on February 2014.

| Conclusion

Eyelid MCL is a rare disease with difficult diagnosis, even though it is more often associated with systemic impairment. There is a strong need for collaboration between ophthalmologists and hematologists, as these patients require concomitant ophthalmologic and hematologic control. The correct management of the disease results in significant clinical improvement, as well as visual acuity recovery, pain relief and better quality of life.

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