Scholars Journal of Medical Case Reports (SJMCR) **ISSN 2347-6559 (Online)**
Abbreviated Key Title: Sch. J. Med. Case Rep. **ISSN 2347-9507 (Print)**

A United of Scholars Academic and Scientific Society, India

Atypical Localization of a Roth Spot Revealing Acute Lymphoblastic Leukemia

Khalid Arroub*, Mohammed Meskini, Redouane Messoudi, Mohamed Kriet
Ophtalmology Department of Military Hospital Avicenne at Marrakech Morocco

***Corresponding author**
Khalid Arroub

Article History
Received: 13.07.2018
Accepted: 26.07.2018
Published:30.08.2018

DOI:
10.36347/sjmcr.2018.v06i08.008

Abstract: The retinal lesions in acute leukemias can result from different mechanisms, their frequency varies from 28% to 50%, the retinal damage occurs following the infiltration of the retina by blast cells or by hemorrhage following thrombocytopenia, They can be revealing of the leukemic picture. We describe the case of this patient, without pathological antecedents, who consults for appearance of a central scotoma associated with a decrease of visual acuity of the right eye, all in a context of alteration of the general condition. The ocular lesions of leukemias are frequent but rarely revealing the disease, the ocular form is considered as the equivalent of a neurological damage and must be treated as such. The purpose of this report is to draw clinicians' attention to this clinical sign of rare localization that can delay diagnosis and lead to vital and functional complications. The diagnosis can be easily evoked with a number of clinical signs without resorting to expensive tests. Rapid diagnosis, evaluation and appropriate management can prevent vital complications and loss of visual function in patients who have been diagnosed early with this condition.
Keywords: retinal lesions, leukemias, scotoma, treated.

INTRODUCTION

Acute leukemias are malignant systemic disorders of the hematopoietic tissue, defined by the clonal proliferation of hematopoietic precursors, lymphoblastic acute leukemias derived from the lymphoid line and acute myeloid leukemias derived from the myeloid lineage.

Leukoses sometimes present with isolated ophthalmological symptoms, without obvious extraocular signs but require urgent management because of their severity [1]. We report a revealing observation of leukemic involvement by an atypical localization of the Roth task.

CASE REPORT

We report the case of a 43-year-old man, with no specific antecedents, who consults with ophthalmic emergencies for the appearance of a central negative scotoma associated with a decrease in visual acuity of the right eye for 10 days associated with an alteration of the general state with episodes of epistaxis, all in a febrile context.

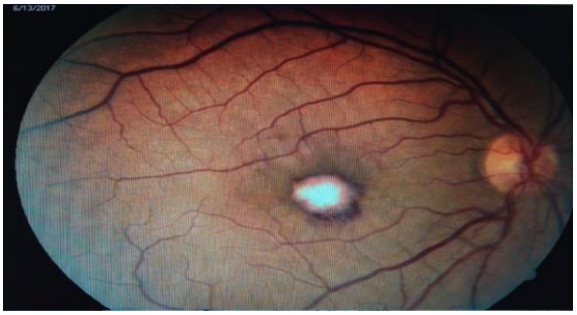
In the ophthalmological examination, there is limited visual acuity to the fingers at 2 meters at the level of the right eye and 9/10 at the level of the left eye. The examination of the anterior segment of the two eyes is without particularity. Examination of the fundus of the right eye revealed an isolated whitish macular isolated task surrounded by a reddish border and the fundus of the left eye is normal.

Macular Optical Coherence Tomography (OCT-SD) revealed a loss of foveal profile in the right eye with massive retrohyaloidal hyperflectivity associated with a shadow cone following the transformation of macular hemorrhage into a fibrous scar. And at the level of the left eye, normal aspect of the macular profile.

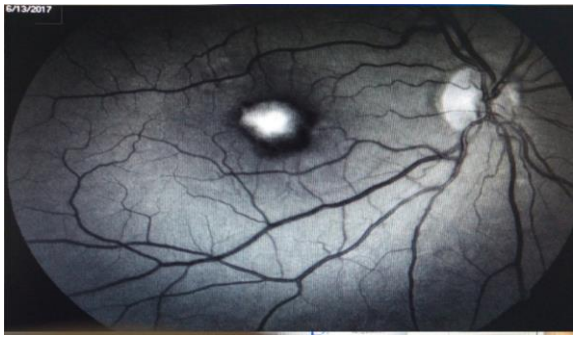
The thorough general clinical examination found an anemic syndrome, peripheral ADP associated with hemorrhagic syndrome made of petechial purpura and epistaxis.

The biological assessment showed a bicytopenia associated with predominantly lymphocytic hyperleucocytosis.

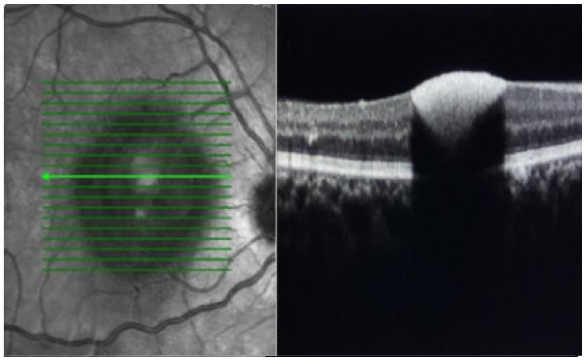
An osteomedullary biopsy revealed acute lymphoblastic leukemia T.



A: Color retinography; Roth's stain



B : anérythre Rétinography; Roth's stain



C: Macular OCT-SD: Disappearance of the macular profile, a macular retrohyaloid hyperreflectivity with a shadow cone following the transformation of macular hemorrhage into a fibrous scar

DISCUSSION

In our case, the association of ocular involvement with the discovery of the Roth spot in full macula associated with an alteration of the general state directs us to the suspicion of systemic involvement more in favor of acute leukemia.

Ocular involvement is common and ranks third after the meningeal and testicular locations. Ocular involvement can produce different clinical pictures [2-6]. Ophthalmological involvement of ALL, which is an eye tumor syndrome, and ophthalmologic involvement of pancytopenia, should be differentiated. Our case reports rather an involvement related to pancytopenia, typically giving retinal hemorrhages with white center (Roth spots) [3-5].

The choroid is the most affected, which can affect both the choriocapillary pigmented epithelium. In the case of a tumoral syndrome, chorioretinal infiltration by blast cells results in nodules or whitish preretinal plaques often associated with haemorrhages and predominates in the posterior pole [2,6]. However, all the oculo-orbital structures can be affected giving: iretic heterochromia, kerato-uveitis with hypopion, iris nodules, ocular hypertonia or spontaneous hyphema and diffuse subconjunctival haemorrhages [1]. Ocular involvement is considered CNS involvement [7,8]. It imposes an adequate treatment in urgency [9].

CONCLUSION

Ocular involvement of leukemias is frequent but rarely indicative of the disease; the ocular form is considered as the equivalent of neurological damage and must be treated as such. The management of acute leukemias must be multidisciplinary and urgent.

REFERENCES

1. Novakovic PE, Kellie SJ, Taylor DA. Childhood leukaemia: relapse in the anterior segment of the eye. British journal of ophthalmology. 1989 May 1;73(5):354-9.
2. Charif MC, Belmekki M, Hajji Z, Tahiri H, Amrani R, El MB, Msefer FA, Berraho A. Ophthalmic manifestations of acute leukemia. Journal francais d'ophtalmologie. 2002 Jan;25(1):62-6.
3. Basu B. Retinal mass in a case of pediatric myelodysplasticsyndrome (refractory anemia with excess of blasts). Eur J Oph-thalmol. 2010;20:618—20.
4. Charles KS, Leelah N, Boodoo L, Murray DC. Ophthalmic manifestations of haematological disorders. West Indian Medical Journal. 2013 Jan;62(1):99-103.
5. Elasri F, Reda K, Oubaaz A. White-centered retinal hemorrhage as presenting sign of acute lymphoblastic leukemia. Journal francais d'ophtalmologie. 2013 Dec;36(10):905.
6. Hua LV, Le ST, Yudcovitch LB. Floaters and decreased vision as initial symptoms of acute lymphoblastic leukaemia. Clinical and Experimental Optometry. 2011 Nov;94(6):595-7.
7. Taamallah-Malek I, Chebbi A, Bouladi M, Nacef L, Bouguila H, Ayed S. Massive bilateral subconjunctival hemorrhage revealing acute lymphoblastic leukemia. Journal francais d'ophtalmologie. 2013 Mar;36(3):e45-8.
8. Berradi S, Daoudi R. White-centered retinal hemorrhage. The Pan African medical journal. 2014;17.
9. Berthou C, Roncin S, Colin J, Abgrall JF. Ocular sites of acute leukemias. Journal francais d'ophtalmologie. 1996;19(6-7):470.