B-CELL ACUTE LYMPHOBLASTIC LEUKEMIA ASSOCIATED WITH UNILATERAL SEROUS RETINAL DETACHMENT: CASE REPORT

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Purpose

Describe a case of B-cell acute lymphoblastic leukemia associated with unilateral serous retinal detachment.

Case report

A 23-year-old male presented with cervical adenomegaly associated with febrile episodes and coughing for 30 days. Afterwards, he developed asthenia and fatigue associated with bruises and purpuric lesions on his body. A blood test revealed anemia, thrombocytopenia and the presence of blasts.

After hematology evaluation, the patient was admitted and initiated treatment for febrile neutropenia and acute leukemia.

One day after admission the patient complained about blurred vision on his left eye (OS) and was requested ophtalmology evaluation.

On the ophthalmologic evaluation, his best correction visual acuity (BCVA) was 1,0 on right eye (OD) and 0,2 on OS. Ophthalmoscopy on OD was normal and on OS was noted a reduced macular brightness.

The optical coherence tomography (OCT) scan showed a serous retinal detachment on OS.

Red-free photograph demonstrated better delineation of the detachment borders.

The patient was followed during his hospitalization period while undergoing with chemotherapy treatment.

After two weeks of treatment for acute leukemia there was almost complete reduction of the serous retinal detachment and was BCVA OS improved to 1.0.

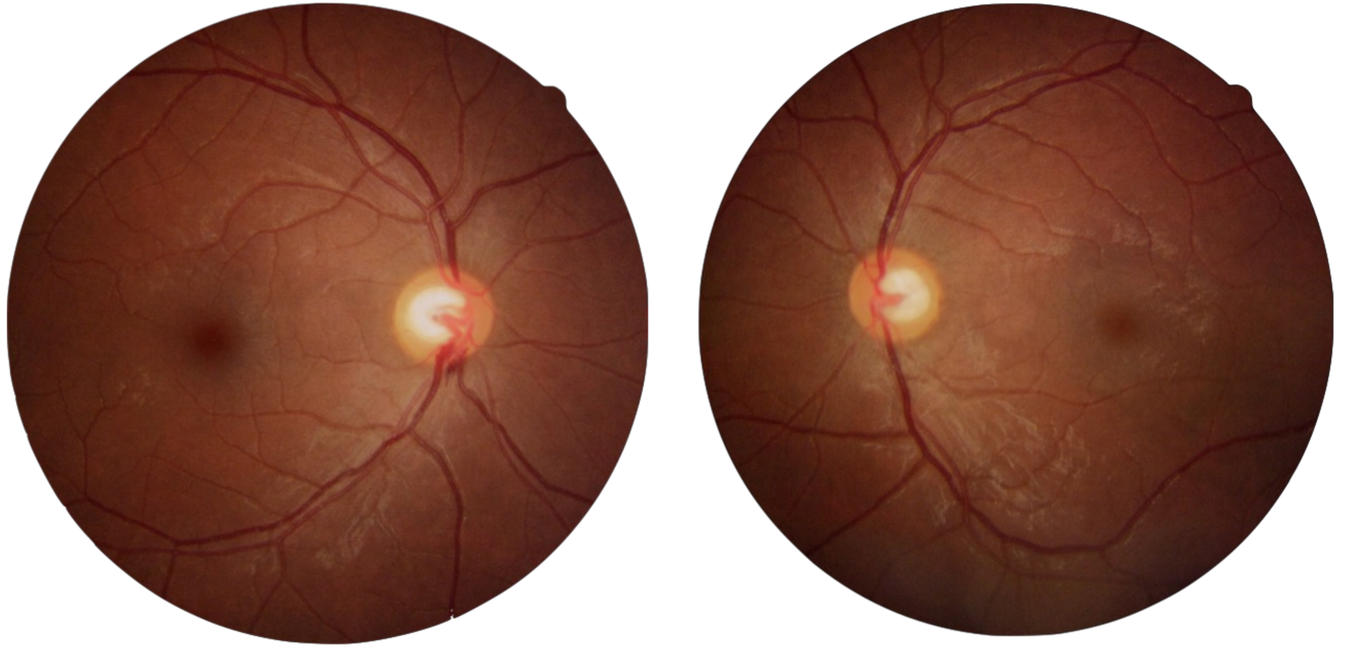


Figure 1,2: Color fundus of right eye and left eye.

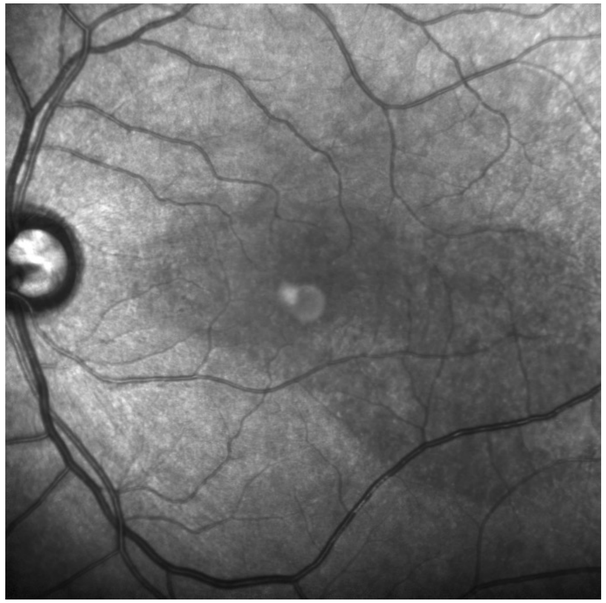
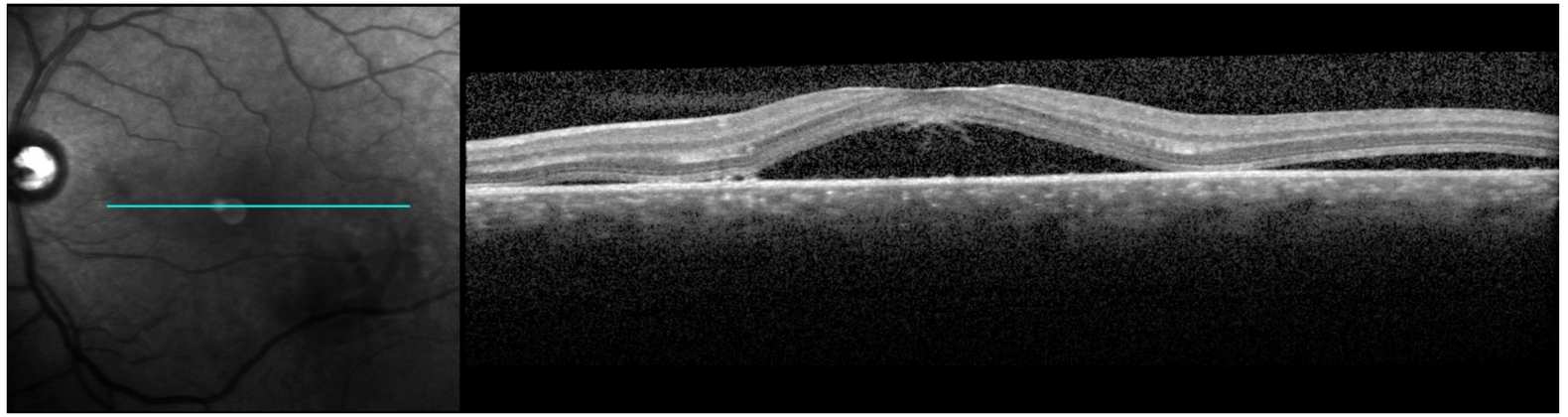
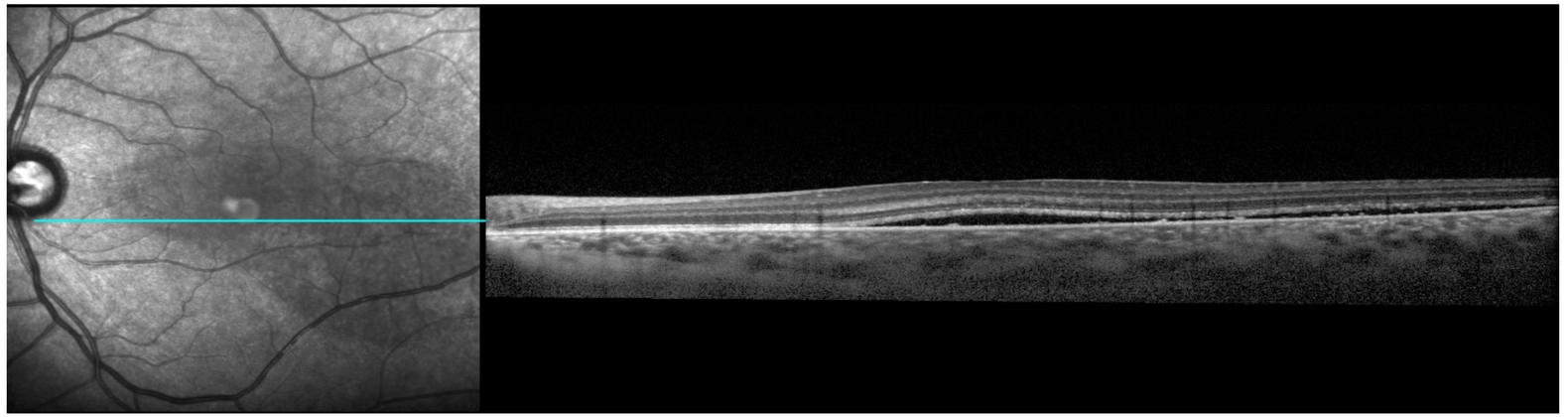


Figure 3: Red-free fundus photograph of left eye showing delineation of detachment borders.



Day 1



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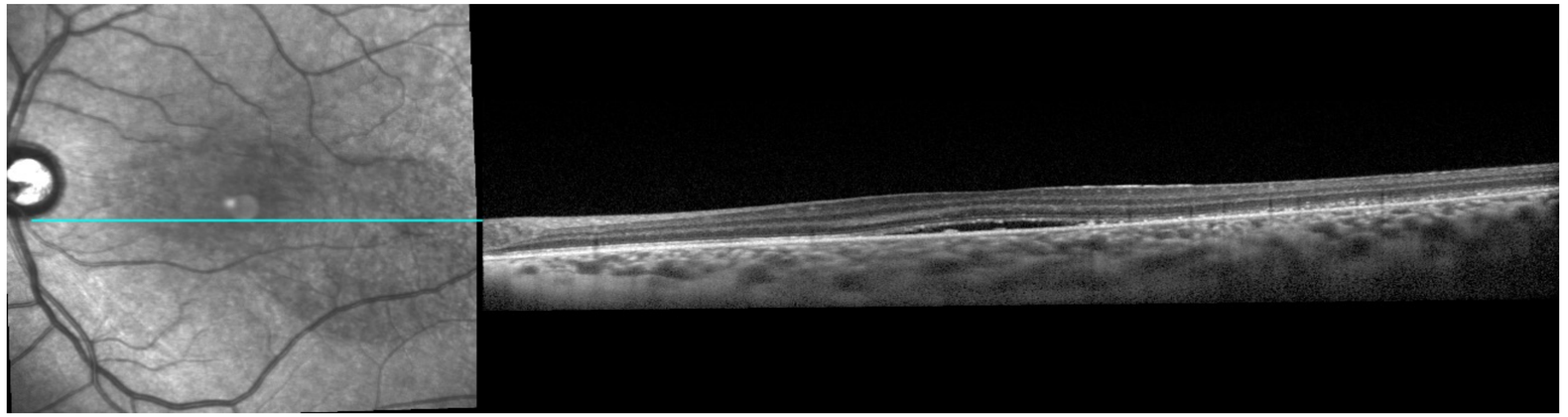

Day 14

Figure 4,5,6: OCT scans showing the reduction of serous retinal detachment.

Results

A reduction of serous retinal detachment and consequently improvement of BCVA was noticed with 2 weeks of follow-up. In this period the patient was just undergoing chemotherapy treatment for acute leukemia and none specific eye treatment was necessary.

Discussion

When eye is affected by leukemia, more often is a case of acute leukemia than chronic cases.

The retina is the most commonly eye structure affect in patients with acute leukemia. It can be directly affected by infiltration, by hemorrhage and by ischemic changes.

The SRD is a rare ocular finding in leukemia and is reported in posterior pole. It can be caused by an invasion of lymphoblasts to choroidal vasculature developing a choroid dysfunction.

Discussion

The treatment for ocular manifestations of leukemia are usually treated with systemic chemotherapy.

A new diagnosis of SRD without any commonly causes should raise a hypothesis for leukemia for an early diagnosis. Is important for the ophthalmologist recognize the ocular manifestations by leukemia for assessing the course and prognosis of the patient disease.

References

1. Kincaid MC, Green WR. Ocular and orbital involvement in leukemia. Surv Ophthalmol 1983; 27: 211–232.
2. Schachat AP, Dhaliwal RS. Leukemias and lymphomas. In: Ryan SJ (ed). Retina, 2nd ed. CV Mosby: St Louis, 1994, pp 873–890.
3. Allen RA, Straatsma BR. Ocular involvement in leukemia and allied disorders. Arch Ophthalmol 1961; 66: 490–508.
4. Stewart MW, Gitter KA, Cohen G. Acute leukemia presenting as a unilateral exudative retinal detachment. Retina 1989; 9: 110–114.
5. Duke-Elder 5 : System of Ophthalmology. Retina . Vol X. St Louis, CV Mosby, 1967, pp 387-393