Leukaemic Retinopathy with Serous Macular Detachment – A Case Report

Dr. Rajesh P* MD, Dr. M A Safarullah* MS, Dr. Syed Basheer Ahmed* DO

Hematological disorders can occasionally present with ocular symptoms. In the setting of an established systemic illness, it is easy to explain the ocular findings. But when ocular involvement is the primary presentation of the systemic disease, the diagnosis can be difficult, especially when the presentation is atypical.

We report a 36 years old male, who presented with sudden decrease in vision in both the eyes, right more than the left, of four days duration. He gave history of fever with joint pain 2 weeks prior to the presentation. On examination the Best Corrected Visual Acuity was 1/60 in right eye and 6/9 in the left eye. The pupils were normal and briskly reacting to light with no RAPD. AC and vitreous were quiet. Fundus examination showed a serous detachment of the macula in the right eye and retinal hemorrhages and dilated tortuous veins in both the eyes. Some of the hemorrhages were white centered (Fig. 1 & 2). B scan of the right eye showed macular detachment with peripapillary choroidal thickening (Fig. 3). Fluorescein angiography showed blocked fluorescence corresponding to the areas of hemorrhage in both the eyes and segmental leakage from the arterioles and capillaries with late staining in the right eye (Fig. 4, 5).

Haematological work up was also done. Hemoglobin was 4.5 gm % and total count was 1,16,000 cells/cumm. Peripheral smear showed microcytic hypochromic RBCs with many polychromatic cells and occasional nucleated RBCs. WBCs showed blast cells.
confused with CRVO. Involvement of vitreous and optic nerve are rare happenings in ocular leukemia.

Histopathologically, choroid is the most commonly involved structure in leukemia. Choroidal involvement can lead to hyperplasia of overlying RPE and pigment clumping which leads to “leopard spot appearance”. Serous detachment of overlying retina has been attributed to the decreased blood flow in the choriocapillaries, leading to disruption of retinal pigment epithelial barrier and accumulation of choroidal fluid in the sub-retinal space. Serous detachment occurs only in 0.3 % of the patients.

Our patient had sonological evidence of choroidal thickening in the eye with the serous detachment, signifying choroidal involvement. Fluorescein angiography showed leakage from arterioles and capillaries in the eye with serous detachment. Hence leakage from the vessels could also have contributed to the serous detachment in this patient in addition to the mechanism already described.

In conclusion, leukemic retinopathy may be asymptomatic in many patients and serous detachment causing visual disturbance could be one of the presenting features of the disease.

References