BILATERAL MACULAR HEMORRHAGE DUE TO ANEMIA IN MALARIA- A CASE REPORT

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Bilateral macular hemorrhage due to anemia is an extremely rare finding. Here we present the case of a 30 year old man presenting with bilateral macular hemorrhage due to malaria induced anemia.

Key Words

Macular hemorrhage, anemia, malaria

Case Report

A 30 year old male presented in RIMS OPD with the complains of sudden painless diminution of vision since 20 days. He had been diagnosed with malaria 1 month back (mixed infection with P. falciparum & P. vivax). He was treated with Inj. Falcigo 60 mg. 2 amp. IM on 1st day, 1amp. daily thereafter for 4 days, followed by T.Lumether forte B.D. for 3 days at a local health centre.

During this period his Hb% had fallen down to 5gm/dl and he had to undergo 2 blood transfusions. Peripheral blood film showed normocytic normochromic anemia with TLC = 4,500 / ml, DLC=N-76%, L-19%, E-5%. During the course of treatment his visual acuity dropped to 6/18 unaided.

There was no history of trauma or convulsion and his past medical history was insignificant. He was discharged from Health centre with T. Primaquine 15mg for 14 days & T.Lariago 2 drops 2 weeks apart.

He presented in RIMS OPD 20 days later with diminished vision. Visual acuity was RE 6/60 and LE 6/36.

Both eye externally normal, anterior segment, pupillary reaction and ocular movements were normal and IOP-17. 3mm Hg. Funds examination revealed scattered retinal haemorrhage RE and macular haemorrhages in both eyes.

General examination revealed marked pallor; BP-120/70, while blood examination revealed Hb 8gm/dl. Bleeding time, Clotting time & platelet count were within normal limits. Peripheral blood picture revealed normocytic normochromic anemia.

All antimalarial drugs were stopped. The patient was advised rest in decubitus position.

Cap. Hemfer (iron supplement), T. Celin (vitamin C) was prescribed along with nutritious diet to improve the anemic status. He was also counselled regarding the self resolving nature of his pathology and was asked to come for review after 15 days.

15 days leter his Hb% was 9 gm/dl. His visual acuity had improved to 6/18 both eyes. Fundus examination revealed resolving macular hemorrhage in both eyes, and improving retinal hemorrhage in RE. He was asked to continue the same advice.

After 1 month his visual acuity returned to 6/6 both eyes & Hb% improved to 13 gm/dl.

Discussion

Anemia is a common manifestation of all types of malaria. Anemia in malaria is multifactorial. The causes include obligatory destruction of red cells at merogony, accelerated destruction of non-parasitized red cells, bone marrow dysfunction, shortened red cell survival, increased splenic clearance and sometimes massive gastrointestinal hemorrhage.

Macular hemorrhage may be subhyaloid or preretinal. Subhyaloid hemorrhage is located between posterior vitreous base and internal limiting membrane (ILM), while pre retinal hemorrhage is located between ILM and nerve fiber layer (NFL). In practice the differentiation between the two is difficult. These hemorrhages acquire a boat shaped appearance with a sharp demarcation line. They tend to clear spontaneously without any sequeale.

Causes of macular hemorrhage include retinal artery macroaneurysm, diabetic retinopathy, branched retinal vein occlusion, severe head trauma and shaken baby syndrome. Other rare causes include Terson's syndrome, valsalva manoeuvre, anemia due to bone marrow aplasia, leukemia, auto immune haemolytic anemia, thrombocytopenia, aplastic and intraocular pressure variation during LASK.

In our patient the various causes of macular hemorrhage were excluded and malaria induced anemia seemed the most appropriate etiology. The patient's blood sugar, BP, platelet count, bleeding time, clotting time were within normal limits and there was no past history of any major trauma. The explanation for macular hemorrhage in anemia is not clear. The various factors may be anoxia, venous stasis, increased capillary permeability, and thrombocytopenia.

To conclude bilateral macular haemorrhages due to anemia are rare. Such hemorrhage resolve spontaneously and visual acuity improves in the majority of cases. Management is aimed at improving the anemic status of patient.

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