ISSN- O: 2458 - 868X, ISSN–P: 2458 – 8687
National Library of Medicine - ID: 101731606

International Journal of Medical Science and Innovative Research (IJMSIR)
IJMSIR : A Medical Publication Hub
Available Online at: www.ijmsir.com
Volume – 7, Issue – 3, May – 2022 , Page No. : 358 - 360

A Rare case of Macular Haemorrhage after blood transfusion

[1]Dr. Shanti Priya, Department of Ophthalmology, Government Medical College and Hospital Kota Rajasthan – 324001.

[2]Dr Jaishree, Senior Professor and Unit Head, Department of Ophthalmology, Government Medical College and Hospital Kota Rajasthan – 324001.

[3]Dr. Baibhav Kumar, Department of Surgery, Government Medical College and Hospital Kota Rajasthan – 324001.

[4]Dr. Ashish Gupta, Junior Resident, The White Medical College and Hospital Pathankot -145001

Corresponding Author: Dr. Shanti Priya, Department of Ophthalmology, Government Medical College and Hospital Kota Rajasthan – 324001.

Citation this Article: Dr. Shanti Priya, Dr Jaishree, Dr. Baibhav Kumar, Dr. Ashish Gupta, "A Rare case of Macular Haemorrhage after blood transfusion", IJMSIR- May - 2022, Vol – 7, Issue - 3, P. No. 358 – 360.

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Retinopathy known to be associated with anemia having many scattered haemorrhages, Roth's spot and signs of retinal anoxia Vitamin B12 deficiency is found to be associated with various factors resulting in hypoxic damage to endothelial tissue of blood vessels. Here we present a case of Isolated Macular Haemorrhage caused after blood transfusion in Vitamin B12 deficiency Anemia patient. It is one of the rarest case seen post transfusions with isolated macular haemorrhage and its self-resolution.

Keywords: Macular Haemorrhage, Retinal Hypoxia, Anemia, Megaloblastic

Introduction

Macular hemorrhages are accumulations of blood in the macular area and originate in alterations of the retinal or choroidal circulation. It is a common cause of acute loss of central vision. It is mainly known to be caused by ARMD and other conditions like associated with CNVM, including myopia, trauma, ocular histoplasmosis and angioid streaks [1,2,3], Diabetic retinopathy, hypercoagulable states, aplastic anemia. To the best of our knowledge so far, it is a first case of isolated acute macular haemorrhage that has been documented after blood transfusion in a patient of anaemia.

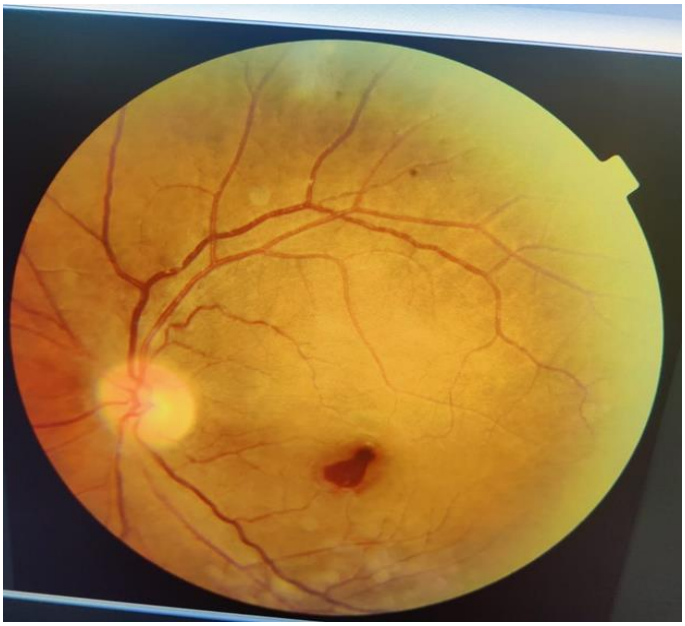
Case report

43-year-old male presented to eye OPD with complaint of appearance of red arrow in front of Left Eye for last one day. On detailed history, patient was admitted in medicine ward with vertigo, generalised weakness and multiple body aches for last 4-5 days with a past history of alcohol abuse since last 10 years. After investigations Patient was found to have Hb-3.4g/dl, TLC-2.60X10^3, Platelet count-46000/mcl, Vitamin B-12- 57pg/ml, BT & CT –Normal and Peripheral Blood Film showing leukocytopenia with normal maturation and relative lymphocytosis, Normocytic RBC's with microcysts and macrocysts, macro-ovalocytes, tear drop cells & pencil cells. Considering the diagnosis of Megaloblastic Anaemia with Chronic Alcoholism; 2 Units of whole blood transfusion (450 ml) was done on alternate day. After 4-6 hours of second transfusion, patient complaint

of red arrow in front of Left Eye and was referred to ophthalmology department.

On examination, BCVA- RE- 6/6, LE- 6/24, IOP BE 11 mm of Hg with Non-Contact Tonometry, Anterior Chamber- Clear and well formed. On detailed fundus examination of fundus with indirect ophthalmoscopy, LE disc was within normal limits, macula had an arrow like haemorrhage over macula with clear distinct margins, with no other haemorrhage or unusual spot found. Fundus photograph of the patient was collected showing a small arrow shaped haemorrhage over macula (Fig 1) and OCT was performed showing well defined hyper eflective lesion involving inner retinal layer having a casting shadow behind the lesion that is consistent with finding of blood in OCT. (Fig 2,3)

Fig – 1: Fundus photograph of the patient



The patient was started on Eye drop Nepafenac 1% TDS and was followed up on 7th, 14th, 28th day and then after 42 days. The haemorrhage resolved gradually at its own after treatment of anaemia with blood transfusion and visual status of the patient improved.

Figure- 2 and 3: showing well defined hyperreflective mass involving superficial layers of retina and casting its shadow in deep layers.

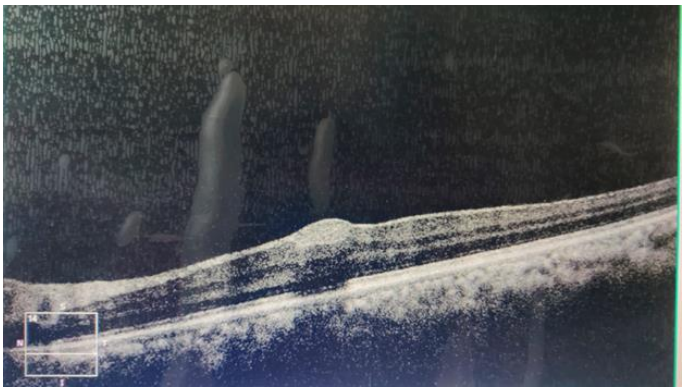


Figure 2

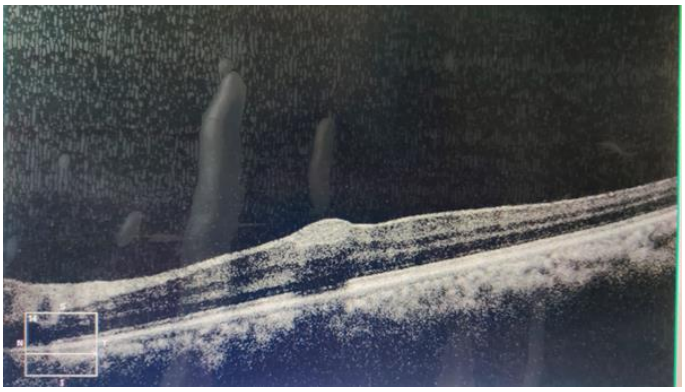


Figure 3

Discussion

Anaemia; most common haematological disorder presents with a variety of ocular manifestations. Retinopathy is seen in 28.3% of anaemic patients and thrombocytopenia is found to be co-existing factor in around 38% of cases. There are increased chances of retinopathy with increase in severity of anaemia. Retinal changes associated with anaemia may vary from venous tortuosity, cotton wool spots, haemorrhages at various levels involving retina and choroid and many more[4].

Retinal hypoxia causes vascular dilatation; that further increases transmural pressure because of hypoproteinemia; and microtraumas to the vessel walls, which leads to retinal edema and hemorrhages. In our

case of patient with vitamin B 12 deficiency, macular haemorrhage was seen typically after transfusion of blood. Anaemic retinopathy is known to cause anoxic endothelial dysfunction that may lead to capillary disruption followed by subsequent fibrin plug formation. Any vascular instability caused after blood transfusion can disrupt the fibrin plug site and its subsequent diffusion along and above retinal nerve fibre layer. This can be considered to be one cause of haemorrhage post blood transfusion. Haemorrhage resolved at its own with management of anaemia. Thus we report a rare event of isolated macular haemorrhage post blood transfusion that may present with sudden diminution of vision.

References

1. Shultz RW, Bakri SJ. Treatment for sub macular hemorrhage associated with neovascular age-related macular degeneration. Semin Ophthalmol 2011 ; 26 (6) : 361 - 71.

2. Skaf AR, Mahmoud T. Surgical treatment of age-related macular degeneration. Semin Ophthalmol 2011 ; 26 (3) : 181-91.

3. Avery RL, Fekrat S, Hawkins BS, Bressler NM. Natural history of sub foveal subretinal hemorrhage in age-related macular degeneration. Retina 1996;16:183

4. Vaggu SK, Bhogadi P. Bilateral macular hemorrhage due to megaloblastic anemia: A rare case report. Indian J Ophthalmol. 2016 ; 64 (2) : 157 - 159. Doi : 10.4103/0301-4738.179720