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# CASE REPORT

## ANAEMIC RETINOPATHY WITH THROMBOCYTOPENIA: AN INTERESTING CASE REPORT

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**ABSTRACT:** Anemia is a group of disorders characterized by decrease in number of circulating red blood cells, decrease in amount of hemoglobin in each cell or both. We report an interesting case of young female who presented to us with clinical presentation of anemic retinopathy with thrombocytopenia. History of bleeding gums with menorrhagia was present. She had short history of diminish vision in both eyes. Fundus changes were very typical of anemic retinopathy with presence of Roth spots as characteristic finding. Disc pallor and venous tortousity was also present in both eyes. Fundus picture showed marked improvement with blood transfusion. Our case confirms the association of anemic retinopathy in patients suffering with severe anemia with coexisting thrombocytopenia.

**KEYWORDS:** Anemia, Retinopathy, Roth spots, Thrombocytopenia, Disc pallor.

**INTRODUCTION:** Anemia is a group of disorder characterized by decrease in number of circulating red blood cells, decrease in haemoglobin in each cell or both.[1] Anemic retinopathy is most likely to occur in patients with severe anemia or when thrombocytopenia is coexisting.[2] The pathophysiology of anemic retinopathy seems to be related to retinal hypoxia, venous stasis, angiospasm and increased capillary permeability. Presence of multiple hemorrhages (dot blot, flame, boat shaped and Roth spots) are hallmark of anemic retinopathy.[3] The Roth spots reflect micro-infarcts. The white centre of Roth spots consist of arrested axoplasm. Causes of anemia include nutritional deficiency, blood loss, inadequate production of red blood cells or increased destruction of red blood cells[4]. Retinal hemorrhages can occur in wide variety of diseases like diabetes, hypertension, sickle cell disorder, eales disease, leukaemia, so haemogram picture becomes very essential for proper diagnosis.

**CASE REPORT:** We present an interesting case of 20years old young female who presented to us with diminished vision in both eyes since 5 days. History of menorrhagia and bleeding gums was present since last 8 days. On examination best corrected visual acuity in right eye was 6/60 and in left eye was 6/24. Intraocular pressure in both eyes was normal. Fundus examination showed (fig. 1, fig. 2, fig. 3) presence of multiple hemorrhages in all quadrants with disc pallor and venous tortousity. The characteristic finding in both eyes was presence of multiple Roth spots.

The haemogram picture showed hemoglobin to be 3.3g/dl along with thrombocytopenia. Anisocytosis was also present. Ultrasonography of both eyes was normal. Patient was given blood transfusion and patient showed marked improvement in her signs and symptoms. After 5 days of blood transfusion, the vision improved to 6/9 in both eyes. The hemorrhages and Roth spots also resolved.

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**DISCUSSION:** Anemic retinopathies can have clinical presentation which can mimic leukamia. Hence early and proper diagnosis is required. A proper hematological diagnosis along with blood transfusion plays a very important role in reversing the changes of anemia. Our case report shows the association of severe anemia and thrombocytopenia in development of anemic retinopathy. Prompt therapy is recommended.

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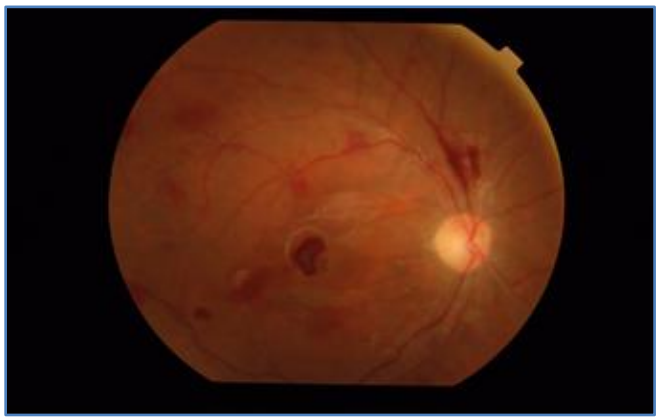

**Fig. 1: fundus picture of right eye showing hemorrhages, Roth spots and disc pallor**

**Fig. 2: fundus picture of left eye showing hemorrhages, Roth spots and disc pallor**

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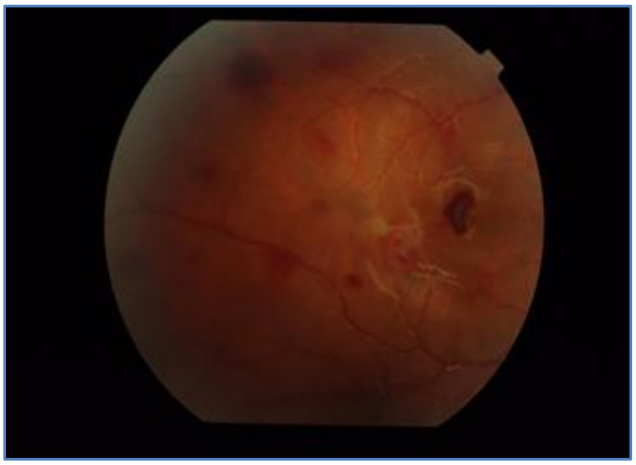

**Fig. 3: Peripheral Fundus picture showing multiple hemorrhages**

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