

A Rare Presentation of Lipemia Retinalis in Child- A Case Report

Sheetal V Girimallanavar^{1*}, Greeshma krishna Reddy², Dakshayini³

¹Associate Professor, Ophthalmology, MS, DNB, VIMS & RC, Bengaluru, Karnataka, India

²Junior Resident, Ophthalmology, VIMS & RC, Bengaluru, Karnataka, India

³Assistant Professor, Ophthalmology, VIMS & RC, Bengaluru, Karnataka, India

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***Corresponding author:** Sheetal V Girimallanavar, Associate Professor, Ophthalmology, MS, DNB, VIMS & RC, Bengaluru, Karnataka, India

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ABSTRACT

Lipemia Retinalis is a rare manifestation of hypertriglyceridemia manifested by abnormal appearance of the retinal arteries and veins, and occasionally the entire fundus.

CASE REPORT: A 1 year 9 months old child presented with abdominal pain, loose stools associated with passage of blood once in every 2 months with no history of familial hyperlipidemia in paediatrics OPD.

Relevant investigations were sent and reported to be normal. USG abdomen was done and reported as hepatosplenomegaly. Blood samples noted to be lipemic. Whole genome sequencing was done and turned to be positive.

An ophthalmological examination was conducted, and both eyes' anterior segment were found to be normal. A fundus examination revealed bilaterally tortuous dilated milky white retinal blood vessels, salmon pink retinal background, and pale optic discs with peripapillary atrophy, all of which were suggestive of lipemia retinalis.

CONCLUSION: Patients with lipemia retinalis are more likely to experience acute myocardial infarction and cardiovascular accidents due to their increased serum lipid levels. There may also be retinal vascular disorders, such as occlusions of the retinal arteries and veins. Neovascularization and vitreous bleeding can result from ischemia brought on by vascular occlusions.

Key words: Lipemia retinalis, Hypertriglyceridemia, Hyperlipidemia

INTRODUCTION

Lipemia Retinalis is a rare manifestation of hypertriglyceridemia manifested by the abnormal appearance of the retinal arteries and veins, and occasionally the entire fundus.

Lipemia Retinalis, is caused by hypertriglyceridemia with serum triglyceride levels typically greater than 1000 mg/dl.^[1]

Hyperlipidemia without accompanying hypertriglyceridemia does not present with lipemia retinalis.^[2]

The ocular findings result from light scatter induced by the triglyceride-laden chylomicrons in the plasma.^[3]

CASEREPORT

A 1 year 9 months old child presented with abdominal pain, and loose stools associated with the passage of blood once every 2 months with no history of familial hyperlipidemia in pediatrics OPD.

Relevant investigations were sent and reported to be normal. USG abdomen was done and reported as hepatosplenomegaly. Blood samples were noted to be lipemic(whitish in color).

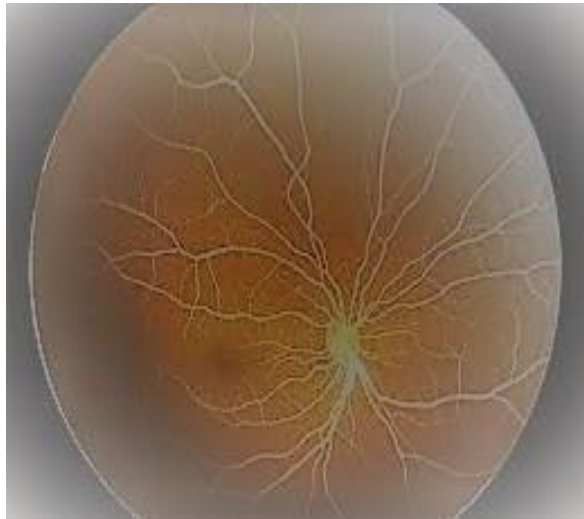
Lipid profile was sent and was reported as total cholesterol-224mg/dl, Triglycerides-5135mg/dl, HDL-56.89mg/dl , LDL- <10mg/dl , VLDL-687mg/dl.

Whole genome sequencing was done and confirmed a homozygous lipoprotein gene coding mutation.

An ophthalmological examination was conducted, and the eye was fixating well.

Anterior segment examination showed normal features with good visual acuity.

A fundus examination revealed bilaterally tortuous dilated milky white retinal blood vessels, salmon pink retinal background, and pale optic discs, all of which were suggestive of lipemia retinalis.



RIGHT EYE



LEFT EYE

DISCUSSION

Lipemia retinalis is an ocular finding associated with elevated plasma levels of triglycerides.⁽²⁾

The early signs of lipemia retinalis occur in the peripheral retina, and as triglyceride levels increase, they spread to the posterior pole. At triglyceride levels of 2500–3499 mg/dL, the peripheral vessels appear creamy and thin; at levels of 3500–5000 mg/dL, the vessels in the posterior pole assume a creamy color; and at levels exceeding 5000 mg/dL, the fundus becomes salmon-colored, with creamy arteries and veins that can be distinguished by caliber only.

Lipemia retinalis is an important ocular sign of a life-threatening but easily treatable metabolic disorder.

It serves as a vital clinical sign of hypertriglyceridemia because acute triglyceride elevations may be asymptomatic at first, delaying treatment of a potentially lethal metabolic disorder as elevations of this magnitude may lead to cardiovascular consequences including heart attack or stroke.^[2]

To lower blood triglyceride levels to less than 500 mg/dl is therefore the goal of treatment.

The reduction of triglycerides and cholesterol can be achieved via a variety of medical procedures. The patient's primary care physician should monitor the patient to treat the hyperlipidemia.

CONCLUSION

Patients with lipemia retinalis are more likely to experience acute myocardial infarction and cardiovascular accidents due to their increased serum lipid levels. There may also be retinal

vascular disorders, such as occlusions of the retinal arteries and veins. Neovascularization and vitreous bleeding can result from ischemia brought on by vascular occlusions.

Fundus examination for any child with pain abdomen and hepatosplenomegaly can sometimes clinch the diagnosis of a life-threatening condition like hypertriglyceridemia.

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