Secret in the eyes - fish eye disease

Sir,

In response to "Co-existence of classic familial lecithin-cholesterol acyltransferase deficiency and fish eye disease in the same family",[1] we would like to report a case of Fish eye disease.

A 42-year-old male was referred for physician consultation for low high-density lipoprotein (HDL) cholesterol levels. It was found that patient had persistently low HDL cholesterol (<10 mg/dl) and persistently high serum triglycerides (>200 mg/dl) on multiple occasions.

The patient was nonobese, nonsmoker, and had no other addictions. He had no history of premature cardiovascular

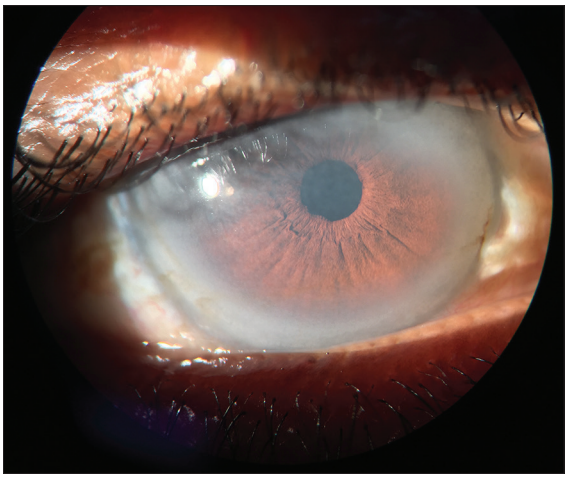

Figure 1: Corneal opacities

events or renal failure in the family. Patient's fasting blood sugars, renal function tests, and urine analysis were normal.

This mystery of persistent hypoalphalipoproteinemia was solved when it was noticed that patient had bilateral corneal opacities [Figure 1]. Ophthalmologic evaluation revealed corneal opacities involving all the layers of the cornea with maximum density near the limbus, without any impairment of vision.

Persistent hypoalphalipoproteinemia with characteristic corneal opacities led to the provisional diagnosis of fish eye disease. Plasma lecithin- cholesterol acyltransferase (LCAT) activity performed at Pacific Biomarkers, USA, was normal. Genetic studies could not be performed because of economic non-viability. Family members had no dyslipidemia or corneal opacities.

Fish eye disease is a rare disease with only about thirty case reports.[2] Fish eye disease or partial LCAT deficiency was named after the appearance of cornea similar to that of boiled fish.[3] There is a partial deficiency of alpha-LCAT activity (present in HDL) while beta-LCAT activity is preserved.[4]

In contrast to total LCAT deficiency, fish eye disease patients have no anemia or renal failure. There is no risk for premature coronary artery disease.[5]

The patient was reassured and advised to follow-up with ophthalmologists at regular intervals.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Access this article online	
Quick Response Code:	Website: www.indianjnephrol.org
	DOI: 10.4103/0971-4065.179304

How to cite this article: Ingle VK, Maharana PK, Rajesh P. Secret in the eyes - fish eye disease. Indian J Nephrol 2016;26:313-4.