

Blurred vision

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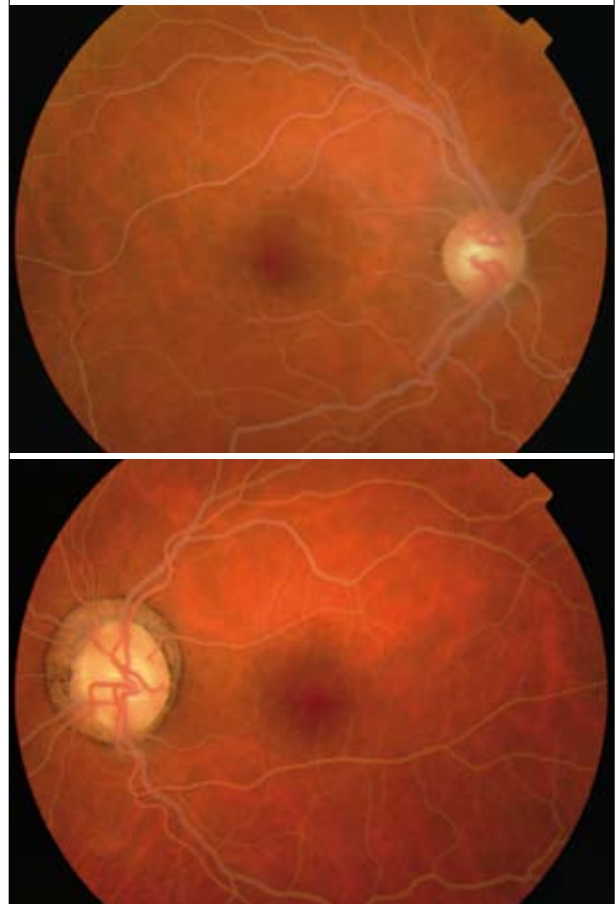
CASE REPORT

A 36-year-old man without relevant medical history was referred to our hospital with classical symptoms of hyperglycaemia. The last few weeks before admission, he had suffered from thirst, polyuria, weight loss, and visual blurring. He was obese with a body weight of 98 kg and height of 1.75 m (BMI 32 kg/m²). Physical examination revealed a few small eruptive xanthomas on his back and left upper leg. Laboratory investigation revealed a grossly elevated blood sugar (32 mmol/l). Fundoscopy was performed (*figure 1*).

WHAT IS YOUR DIAGNOSIS? WHICH ADDITIONAL LABORATORY TESTS WOULD YOU ORDER?

See page 462 for the answer to this photo quiz.

Figure 1. Fundoscopy



DIAGNOSIS

The serum of the patient appeared to be extremely lipaemic with serum triglyceride levels of 255 mmol/l (the highest level recorded in this hospital in 30 years), and serum cholesterol 60 mmol/l, indicating massive accumulation of chylomicrons in his blood. Arterial blood gas analysis showed a pH of 7.41 and there were no ketones present in his urine. A variety of laboratory tests was impossible to perform due to the presence of chylomicrons. There were no signs of pancreatitis. Visual acuity was normal i.o (OD) and o.8 (OS).

The patient was treated with intravenous saline and insulin for three days together with metformin 500 mg orally twice daily and withholding food for two days, followed by a low-fat diet afterwards. Shortly thereafter, gemfibrozil 600 mg twice daily was added. His blood glucose levels decreased rapidly within one day to below 10 mmol/l. In five days his serum triglycerides decreased gradually to below 100 mmol/l, and after only three weeks they reached a level just below 3 mmol/l (figure 2). Two months later he was normoglycaemic (blood glucose 5.6 mmol/l, HbA1c 6.2%) with metformin treatment only. His serum triglycerides completely normalised (1.1 mmol/l). Fundoscopy showed no abnormalities (figure 3).

The diagnosis is lipaemia retinalis associated with severe hypertriglyceridaemia caused by *de novo* diabetes mellitus type 2.

Figure 2. Lipaemic serum on admission and in the course of three weeks

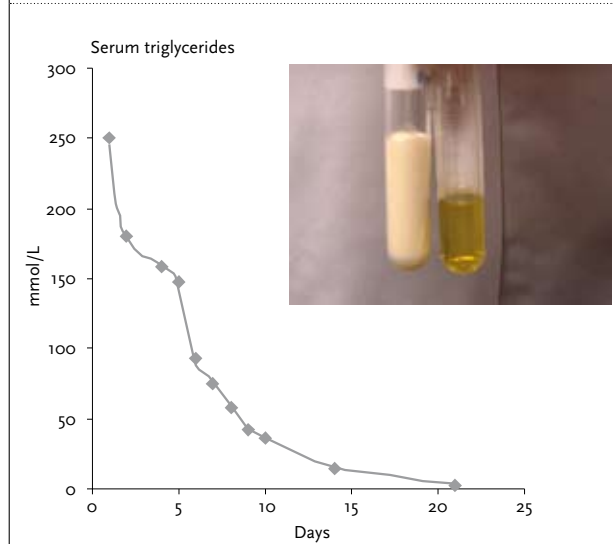


Figure 3. Disappearance of creamy appearance of retinal vessels after normalisation of serum triglycerides

