

**Title:**

**Acute pancreatitis secondary to severe hypertriglyceridemia induced by antiretroviral therapy (ART)**

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**Acute pancreatitis secondary to severe hypertriglyceridemia induced by antiretroviral therapy (ART)**

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Dear Editor,

Hypertriglyceridemia is the third cause of acute pancreatitis after lithiasis and alcohol<sup>1</sup>.

When triglycerides are >2000 mg/dL, the risk increases to 20%<sup>4</sup>

Acute pancreatitis is a common cause of morbidity in patients infected with HIV (Human Immunodeficiency Virus). Retrospective studies have suggested that it is more common than in the general uninfected population.<sup>2</sup>

One of the drugs used in HIV that is related to hypertriglyceridemia is Lamivudine<sup>4</sup>.

## Clinical case

This is a 41-year-old man with a recent diagnosis of HIV in antiretroviral treatment with Dolutegravir/Lamivudine. He consulted for epigastralgia irradiated to both hypochondria with vomiting.

The physical examination was anodyne.

In analysis - which has a milky appearance (Image 1) - it is obtained: Leukocytes 14,300 x10<sup>3</sup> / $\mu$ L, neutrophils 76%, lipase 236 U/L, C Reactive protein 112.5 mg/L. Total cholesterol 1003 mg/dL (not HDL 766 mg/dL), triglycerides 6670 mg/dL.

Abdominal ultrasound was normal.

After analgesic treatment, treatment with fenofibrate, omega 3 and low-fat diet was started showing a favorable evolution, with a decrease in triglycerides up to 792 mg/dL, not requiring treatment with plasmapheresis.

## Discussion

Acute pancreatitis in HIV patients secondary to dyslipidemia is a common complication associated with the use of antiretrovirals.<sup>2</sup>

Other causes of secondary (acquired) hypertriglyceridemia can be alcohol abuse, chronic kidney disease or type 2 diabetes. The concomitant appearance of diabetic ketoacidosis (CAD), hypertriglyceridemia (HTG) and acute pancreatitis (AP) was first described by Nair et al. as "The Enigmatic Triad"<sup>3</sup>

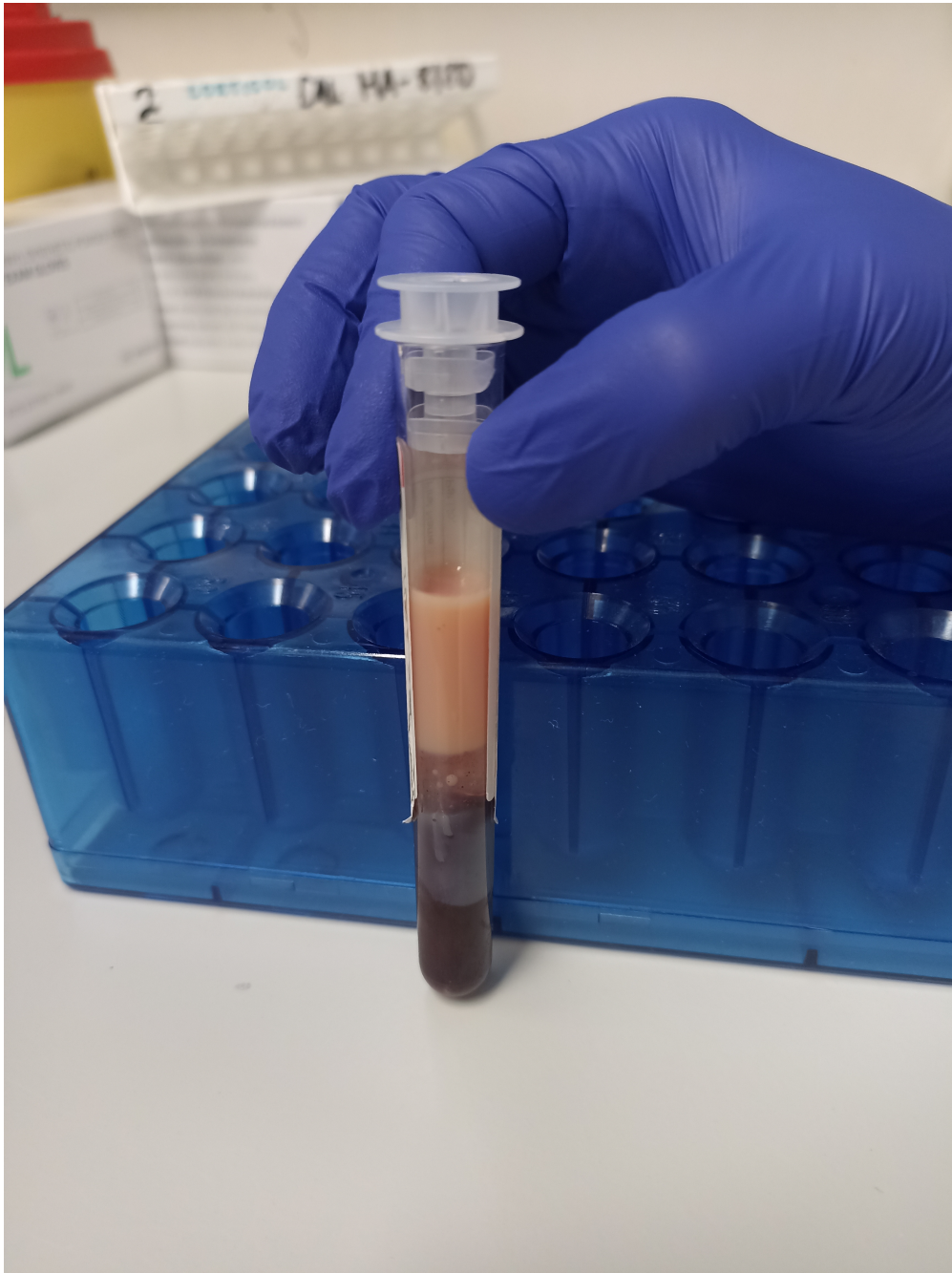
In the study by Capell et al., HIV patients had a higher frequency of pancreatitis associated with antiretrovirals, a lower incidence of biliary pancreatitis and a more severe hospital course<sup>5</sup>.

Based on some clinical guidelines, when triglycerides are very high ( $\geq 500$  mg/dL), the initial goal of treatment requires very low-fat diets ( $\leq 15\%$  of caloric intake), weight reduction, increased physical activity and a drug to reduce triglycerides (fibrate or nicotinic acid)<sup>6</sup>

The goal is to increase the activity of lipoproteinlipase and the degradation of chylomicrons; decreasing triglyceride levels to  $< 500$  mg/dL <sup>6</sup>.

We must pay attention to HIV patients with low baseline CD4/CD8 ratio, overweight and obese, and whose antiretrovirals include Zidovudine, Lamivudine or protease inhibitors.<sup>4-6</sup>

Figure



*Figure 1. Blood sample showing a milky layer due to intense lipidemia.*

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