

## LETTER

## Lipemia and acute coronary syndrome: when color enlightens the truth

Dear Editor,

Hypertriglyceridaemia is a well-known cause of acute pancreatitis which can subsequently cause severe myocardial injury through a variety of mechanisms<sup>1</sup>. Lipemia, manifesting as a turbid orange blood color, is a useful clinical sign of triglycerides accumulation<sup>2</sup>.

A 48-year-old man presented to the emergency department with a 3-day history of intermittent episodes of epigastric pain and nausea, and one day history of diarrhea and dyspnea. His medical history included untreated dyslipidemia due to statin-induced myopathy, alcohol abuse, and obesity. Physical examination revealed abdominal tenderness. His blood pressure was 170/100 mmHg and body temperature 38 °C. A 12-lead electrocardiogram (ECG) showed ST elevation in leads V<sub>2</sub>-V<sub>3</sub>-V<sub>4</sub>. Venous blood sample noted elevated levels of high-sensitive troponin T (hsT) (0.114 µg/L; normal: ≤0.013 µg/L) and C-Reactive protein (200 mg/L, normal: ≤5 mg/L) but the most astounding finding was its turbid orange coloring (Figure 1A) and the extremely high levels of triglycerides (12.076 mg/dl, normal: ≤150 mg/dl). The patient underwent an urgent coronary angiography which revealed a severe thrombotic stenosis of the proximal left anterior descending artery (LAD) (Figure 1B) and an abdominal computed tomography (CT) scan which demonstrated pancreatic edema and peripancreatic fluid. ECG, laboratory and angiography findings implied an acute coronary syndrome while his clinical presentation and CT findings confirmed acute pancreatitis.

An everolimus-eluting stent was implanted in the proximal LAD and patient was started on aspirin, ticagrelor, ezetimibe, and fenofibrate. Plasmapheresis was successfully performed acutely lowering the triglycerides to 740 mg/dl. Hospital course was complicated by acute kidney failure requiring hemodialysis. Renal function and lipidemic profile improved gradually, and the patient was discharged in good condition. At 12 months follow-up, he was asymptomatic with normal lipids.

The turbid orange blood color is indicative of lipemia, caused by triglycerides accumulation<sup>2</sup>. Hypertriglyceridaemia is a well-established cause of acute pancreatitis<sup>1</sup>. Mechanisms of myocardial injury during acute pancreatitis, include hypovolemia, metabolic disorders, prothrombotic derangement and systematic inflammatory response syndrome (SIRS)<sup>1</sup>. Inflammatory cytokines hold a key role in the pathogenesis of acute pancreatitis related SIRS and coronary plaque destabilization as well<sup>1</sup>. Therefore, acute hypertriglyceridaemic pancreatitis probably triggered the awakening of a pre-existing coronary plaque leading to acute coronary syndrome. However, physicians should be aware that possible ECG abnormalities and hsT leak may accompany acute pancreatitis without being diagnostic of coronary artery disease<sup>3</sup>.

### References

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### Conflicts of interest

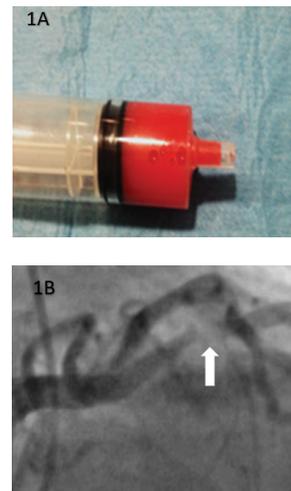
None.

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**Figure 1.** A) Turbid orange blood color indicative of lipemia. B) Coronary angiography showing severe stenosis of the left anterior descending artery (arrow).