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Case Report

Hypertriglyceridemia Induced Acute Pancreatitis: A Short Case Report

Jagdish RK[1*] and Jindal A[2]

[1]Department of Hepatology and Gastroenterology and Liver Transplant, Metro Hospital Noida, India

[2]Department of Hepatology, ILBS, New Delhi, India

1. Abstract

We have seen a case of acute severe pancreatitis admitted with us, with hypertriglyceridemia, with classical dermatological and biochemical signs, and was effectively managed with intravenous fluids along with fibrates, statins and insulin infusion and showed gradual reduction of serum triglycerides with resolution of symptoms.

2. Keywords: Pancreatitis, Hypertriglyceridemia, Dyslipidemias, tuberous xanthomas, lipemic plasma

3. Case Report

A 21-year male was admitted in emergency department with acute onset moderate to severe epigastric pain and vomiting for last 4 days. He didn't have fever, jaundice and gastrointestinal bleed and there was no history of recent analgesic or alcohol use, abdominal trauma and diabetes. On Examination, he appeared dehydrated with a pulse rate of 110/minutes and blood pressure 90/60 mm Hg. Abdomen was diffusely tender and rigid on touch. Contrast enhanced computerized imaging of abdomen showed extensive peripancreatic fat stranding with acute necrotic collection with CTSI score 8/10 (Figure 2). There were no gallstones and pancreatic calcifications. Serum amylase was 2106 mg/dl and serum triglyceride were 6469 mg/dl. Detailed lipid profile on admission was S. Cholesterol 562 mg/dl, HDL-31.40 mg/dlLDL 11.10 mg/dl, TG 6469 mg/dl, VLDL 519.5 mg/dl and at discharge S. Cholesterol 236 mg/dl, HDL 7.5 mg/dl, LDL149.40 mg/dl, TG 341mg/dl. Diagnosis of acute pancreatitis was made. On examination he had painless tuberous xanthomas over knee and elbow (Figure 1). Blood Samples showed lipemic plasma (Figure 3). He was admitted to high dependency unit and was started on fibrates, statins and insulin infusion in nutrilising drip, gradually TG levels and patients' clinical condition were improved and he was discharged after 1 week of hospital stay.

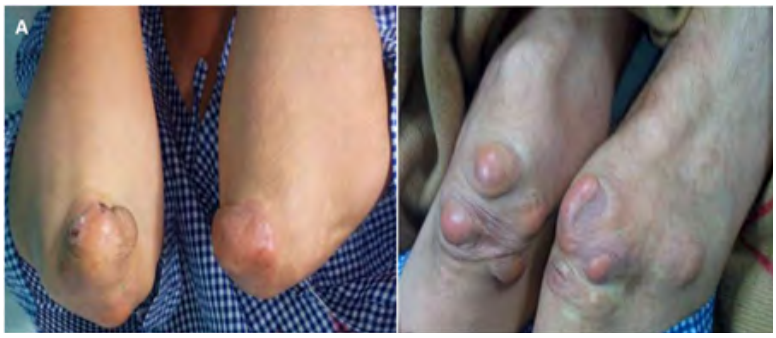

Figure 1: Multiple painless nodular tuberous xanthomas over knee and elbow.

***Correspondence to**: Rakesh Kumar Jagdis, Department of Hepatology and Gastroenterology and Liver Transplant, Metro Hospital Noida, India

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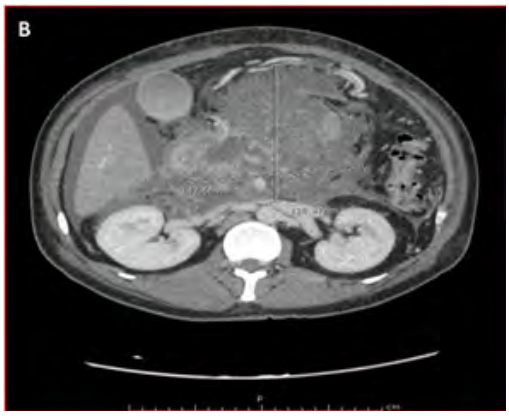

Figure 2: Contrast enhanced computerized imaging of abdomen showed extensive peripancreatic fat stranding with acute necrotic collection, CTSI score 8/10

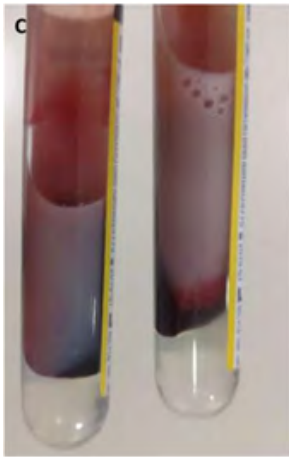

Figure 3: Blood Samples showed lipemic plasma with severe hypertriglyceridemia (6469 mg/dl).

4. Brief Review

Hypertriglyceridemia-induced acute pancreatitis is a rare event, and reported prevalence ranges from 1 to 20 % of all acute pancreatitis causes and can increase up to 50 % causes of acute pancreatitis during pregnancy [1, 2].

4.1. Hypertriglyceridemia can be primary (up to 5% familial- Familial chylomicronemia (hyperlipoproteinemia type 1, childhood presentation, primary mixed hyperlipidemia (type 5)-adulthood presentation and Familial hypertriglyceridemia (hyperlipoproteinemia type 4)) and secondary (Obesity, diabetes, metabolic syndrome, nephrotic syndrome, alcohol, Paraproteinemias, systemic lupus erythematosis, drugs like steroids, Bile acid–binding resins, Tamoxifen, thiazides, Antiretroviral treatment) [3].

4.2. Triglyceride-induced pancreatitis presentation is similar to other metabolic causes but associated clinical manifestations like eruptive xanthomata, which are usually occur in clusters on the skin of the trunk, buttocks or extremities. Ophthalmic evaluation can show lipemia retinalis, which is milky appearance of the retinal vessels with pink retina. Palmar crease xanthomas with foam filled cells which looks as yellowish deposits in palmar creases. Tuberous xanthomas which are foam cells filled, reddish or orange, shiny in appearance, non-tender and moveable on extensor surfaces. These skin lesions [4] considered pathognomonic of familial dysbetalipoproteinemia (hyperlipoproteinemia type 3.

5. Treatment

Specific treatment includes Fibrates as first line treatment with target to decrease TC <500 mg/dl, along with lifestyle modifications. In critical patients early use of insulin infusion [5] in neutralizing drip for 3-5 days have shown good results and continued till TG<500 mg/dl. Statins are also used and especially useful in patients with risk factors for coronary heart disease. Plasmapheresis can be of some benefit in refectory cases.

6. Conclusions

Hypertriglyceridemia induced acute pancreatitis is rare but important cause of acute recurrent pancreatitis and its early diagnosis, stabilization and specific treatment can prevent from catastrophic complications of acute pancreatitis.

References

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