Zieve's Syndrome – A Potential Surgical Pitfall?

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SUMMARY: Zieve's syndrome consists of transient haemolytic anaemic, jaundice, hyperlipidaemia and alcohol-induced liver disease. It is rare with less than 75 cases reported in a Medicine literature search from 1966. It can present acutely with abdominal pain.

Case Report

A 39 year old male lorry driver presented with a twenty four hour history of central abdominal pain radiating to the back, fever and vomiting. He drank 20 units of alcohol per day. On examination he was febrile at 38°C and not jaundiced. He showed epigastric rebound tenderness. Fundal examination revealed lipaemia retinalis and venous samples were lipaemic.

Investigation showed: Haemoglobin 13.2g/dl (14-18), amylase 511iu/(16-108), cholesterol 33mmol/l(3.7-5.4), triglycerides 129mmol/l(0.5-2.0), ALT 110iu/l(5-40), gamma GT 324iu/l(10-40), bilirubin 17umol/l, sodium 120mmol/l, potassium 3.2mmol/l, and urea 6.8mmol/l.

He was managed in a surgical unit with a presumptive diagnosis of pancreatitis. Upper gastrointestinal endoscopy and ultrasound of the abdomen were normal.

Following admission his abdominal pain and fever resolved over 5 days. All biochemical values returned to the normal range during this time. However simultaneously his haemoglobin fell to 8.8g/dl, his bilirubin rose to 35mmol/l and he became jaundiced. The blood film and reticulocyte count confirmed haemolysis. The diagnosis was revised to that of Zieve's syndrome.

His jaundice resolved over 3 days and after 4 weeks without alcohol the patient was clinically asymptomatic with a haemoglobin of 14.1g/dl.

Discussion

In 1958 Leslie Zieve described a syndrome in alcoholic patients of jaundice, hyperlipidaemia and haemolytic anaemic (1).

Abnormalities of red cell metabolism have been suggested as a cause of the haemolysis(2). This syndrome

can occur in patients with or without pre-existent alcohol liver damage(3).

Melrose reported a series presenting with acute abdominal pain and fever. Hyperlipidaemia was noted to subside prior to the onset of haemolysis (4).

Zieve's syndrome can present as an acute abdominal pain. Abstinence from alcohol leads to complete clinical remission and prevents recurrence.

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REFERENCES

1. ZIEVE L. Jaundice, hyperlipaemia and haemolytic anaemia; A heretofore unrecognised syndrome associated with alcoholic fatty liver and cirrhosis. *Ann Intern Med*, 1958; **48**: 471.
2. GOEBEL KM. Red cell metabolism in transient haemolytic anaemia associated with Zieve's syndrome. *Eur J Clin Invest*, 1975; **5**(1); 83-91.
3. BENRAAD MD, PENN HJ, PIETERS, GFFM, TAN HS. Zieve's Syndrome. *JR Coll Physicians*. 1977; **12** (1): 42-52.
4. MELROSE WD, BELL PA, JUDE DM, BAIKIE MJ. Alcohol-associated haemolysis in Zieve's syndrome: a clinical and laboratory study of five cases. *Clin Lab Haematol*, 1990; **12**(2): 159-167.

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