

Case Report

# Patient with cryptogenic cirrhosis

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<https://doi.org/eiki/10.59652/aim.v2i3.238>

**Abstract:** Cryptogenic cirrhosis is cirrhosis of uncertain etiology, with no definitive clinical and histological criteria for a specific disease. More than half of such patients are women, the average age is about 60, and patients generally have only mild liver enzyme abnormalities. Cryptogenic cirrhosis's pathophysiology is unknown; therefore, further research is required to elucidate the underlying etiology. The problem of liver cirrhosis is extremely important since this pathology occurs mainly in young and healthy people. In patients with cryptogenic cirrhosis, aminotransferase (AST and ALT) levels are usually only mildly elevated or normal. In our case report, a 41-year-old male patient was approved to the emergency department due to migraine pain. Liver enzymes were high in the blood analysis taken from the patient. As a result of the liver ultrasound carried out on the patient, it was reported to have decreased liver size and irregular boundaries and compatible with chronic liver disease. The patient used various analgesics due to migraine in his 20s. However, no cause could be identified for the patient's liver failure.

**Keywords:** Cryptogenic cirrhosis, NASH, ALT, AST, Liver failure

## Introduction

Cryptogenic cirrhosis is cirrhosis of uncertain etiology, with no definitive clinical and histological criteria for a specific disease. Cryptogenic cirrhosis accounts for nearly 5% to 30% of cases of cirrhosis and nearly 10% of liver transplants. According to past studies, slightly more than half of such patients are women, the average age is about 60, and patients generally have only mild liver enzyme abnormalities. The pathophysiology of cryptogenic cirrhosis is unknown, and therefore, further research is required to elucidate the underlying etiology.

The problem of liver cirrhosis is extremely important since this pathology occurs mainly in young and healthy people. It also ranks among the top causes of death from digestive system diseases. Clinicopathological analysis of these patients indicates that leading causes include previously unrecognized nonalcoholic steatohepatitis, silent autoimmune hepatitis, viral hepatitis, and past occult ethanol exposure.

Nonalcoholic steatohepatitis (NASH) may account for many cases of cryptogenic cirrhosis. In patients with cryptogenic cirrhosis, aminotransferase (AST and ALT) levels are usually only mildly elevated or normal. This finding may be of particular relevance to cases resulting from NASH. The prevalence of NAFL/NASH parallels age, development of obesity, and type 2 diabetes.

Nonalcoholic fatty liver disease NAFLD refers to liver steatosis in patients with at least one metabolic risk factor (e.g., obesity, diabetes mellitus, dyslipidemia, hypertension). NAFLD may progress to cirrhosis and is likely an important cause of cryptogenic cirrhosis. The pathogenesis of NAFLD has not been fully established. The most widely supported theory suggests that insulin resistance is the key mechanism leading to liver steatosis and possibly steatohepatitis. Most patients with NAFLD are asymptomatic, although some patients may

Received: June 27, 2024

Accepted: July 20, 2024

Published: 26 July 2024



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report fatigue, weakness, and discomfort in the right upper abdominal area. Asymptomatic patients are usually identified when laboratory testing shows elevated aminotransferases or when abdominal imaging shows liver steatosis as an incidental finding.

The complications of cryptogenic cirrhosis include the same complications that may be encountered with other causes of cirrhosis. These complications include hepatocellular carcinoma, hepatorenal syndrome, hepato-pulmonary syndrome, ascites, spontaneous bacterial peritonitis (SBP), and hepatic encephalopathy.

## Case Report

A 41-year-old male patient applied for a control due to liver failure. The patient was approved to the emergency department due to migraine pain. Liver enzymes were high in the blood analysis taken from the patient. As a result of the liver ultrasound carried out on the patient, it was reported to have decreased liver size and irregular boundaries and compatible with chronic liver disease. He was referred to the hepatology polyclinic due to high liver enzyme values. In the blood analysis taken from the patient.

The patient used various analgesics due to migraine. In his 20s, had no alcohol use, and had no family history of liver disease. No viral hepatitis contamination was detected. In the blood tests.

HBSAG(MACRO) 0.45 Negative

ANTI HIV(MACRO) 0.07 Negative

ANTI HCV(MACRO) 0.08 Negative

ANTI HBC TOTAL(MACRO) 0.1 Negative

Liver enzyme values are normal. In the abdominal ultrasound of the patient from a different hospital due to high ALP and GGT values, the liver parenchyma was clearly heterogeneous and coarsened, as well as its contours. It is lobulated (chronic liver disease?).

ALP 220

GGT 547

To investigate the etiology of the patient's liver failure, autoimmune hepatitis parameters were requested from the patient. All values were normal. Wilson tests were requested, but the results were normal.

ANA Negative

ASMA Negative

LKM Negative

Ceruloplasmin negative

A liver biopsy was requested from the patient, and there were no pathological results. The patient's Tomography and MRI results did not have any pathological conclusions other than chronic liver disease. Fat liver has not been detected. A portal vein Doppler was taken, and no pathology results were obtained. The patient's ALP and GGT values continued to be high. In all checks.

Latest results of the patient

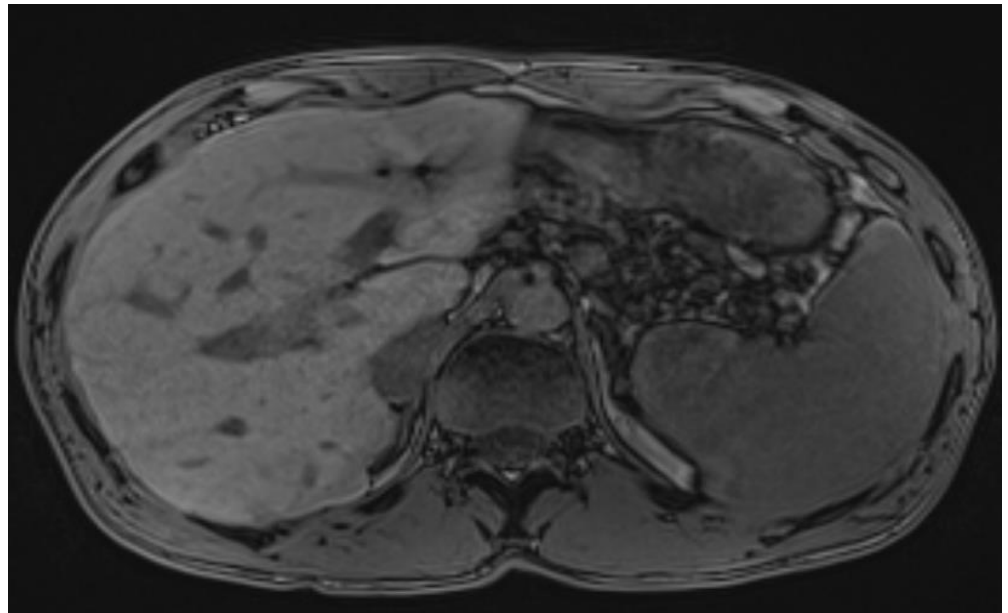
ALP 157

GGT 372

No reason was found for the patient's liver failure. The patient has no active complaints and is clinically in good condition. He continues his routine checks.

## Discussion and Conclusion

Cryptogenic cirrhosis is a common cause of liver-related morbidity and mortality. Non-alcoholic fatty liver disease (NAFLD) is now recognized as the most common cause of cryptogenic cirrhosis. However, in patients with NAFLD, cirrhosis is diagnosed later than other chronic liver diseases and, therefore, has a higher mortality rate. Definitive diagnosis requires a liver biopsy. Our 41-year-old male patient was approved to the emergency department due to migraine pain. Liver enzymes were high in the blood analysis taken from the patient. As a result of the liver ultrasound carried out on the patient, it was reported to have decreased liver size and irregular boundaries and compatible with chronic liver disease. The patient used various analgesics due to migraine. In his 20s, had no alcohol use, and had no family history of liver disease. No viral hepatitis contamination was detected in the blood tests. A liver biopsy was requested from the patient, and there were no pathological results. No reason was found for the patient's liver failure. It is thought that the excessive and various analgesics used by the patient in his younger years may cause liver failure.



**Figure 1:** Decreased liver dimensions and irregular boundaries are observed on the patient's tomography.

## References

- 1 Horlenko OM, Kossey GB, Pushkarenko OA, Prylypko LB. LIVER CIRRHOSIS WITH CRYPTOGENIC GENESSES. CLINICAL CASE. *Wiad Lek.*
- 2 Yalanchili K, Saadeh S, Klintmalm GB, Jennings LW, Davis GL. Nonalcoholic fatty liver disease after liver transplantation for cryptogenic cirrhosis or nonalcoholic fatty liver disease.
- 3 Caldwell S. Cryptogenic cirrhosis: what are we missing? *Curr Gastroenterol Rep.*
- 4 Xu X, Poulsen KL, Wu L, Liu S, Miyata T, Song Q, Wei Q, Zhao C, Lin C, Yang J. Targeted therapeutics and novel signaling pathways in non-alcohol-associated fatty liver/steatohepatitis (NAFL/NASH). *Signal Transduct Target Ther.*
- 5 Younossi ZM, et al. Global epidemiology of nonalcoholic fatty liver disease-Meta-analytic assessment of prevalence, incidence, and outcomes. *Hepatology*
- 6 Arner P, et al. Adipose lipid turnover and long-term changes in body weight. *Nat.*
- 7 Patel N, Sharma B, Samant H. Cryptogenic Cirrhosis. 2023 Feb 12. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing;
- 8 Clark JM, Diehl AM. Nonalcoholic fatty liver disease: an underrecognized cause of cryptogenic cirrhosis.