



Case report

Acute hepatitis C from heterosexual transmission

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ABSTRACT

The diagnosis of acute hepatitis C (HCV) infection is rare since the majority of cases are asymptomatic, which makes the infection usually detected in a chronic phase, most of the time using serological tests. The main route of HCV transmission is percutaneous, with sexual transmission occurring more often in men who have sex with men. The analytical alterations of acute hepatitis C are varied but usually present with ALT elevation higher than AST, very rarely with hepatic insufficiency. We report a case of a patient with a clinical and analytical picture compatible with toxic acute hepatitis, accompanied by hepatic insufficiency, with negative serology for hepatotropic viruses and with no history compatible with the use of substances with hepatic toxicity other than alcohol. During the diagnostic investigation it was concluded that the patient had acute HCV hepatitis and that the transmission route was heterosexual.

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Introduction

HCV infection has been increasing in recent years, especially in the face of increased use of intravenous drugs. Nevertheless, acute HCV infection, usually defined as the period of the first 6 months of infection immediately after exposure to the virus, is very rarely identified, with most of the new diagnoses being made in the chronic phase of the disease. This is mainly due to the lack of symptomatology that characterizes the majority of patients in the acute phase. Cases of acute hepatitis C can thus become real diagnostic challenges, especially when the clinical and analytical characteristics are not fully compatible with this disease. We present a case of acute hepatitis C with atypical characteristics.

Case

The patient was a 45-year-old woman, divorced, without known pathological antecedents and without any usual medication. She consumed about 24–48 g of alcohol per day, for several years and without any recent increase. She denied previous or current use of tobacco or recreational drugs and had never been subjected to blood transfusions. Her current sexual partner had active HCV and HIV infection, both without ongoing treatment.

The patient presented to the emergency department with an acute epigastric pain and food vomiting. She denied other changes

in gastrointestinal transit, bilirubinuria or light colored stools, pruritus, fever, anorexia, and asthenia. There was no history consistent with consumption of any other hepatotoxic agent. Upon physical examination she had jaundice of the skin and mucous membranes and hepatomegaly with regular borders on the abdominal palpation. The rest of the physical examination was normal.

Analytically the patient presented mild anemia (hemoglobin 11.5 g/dL, macrocytic and normochromic), platelets 135000/uL, without changes in the leukocyte series; hyperbilirubinemia at the expense of direct bilirubin (total bilirubin (TB) 7.46 mg/dL – 7 times above the upper limit of normal - and direct bilirubin (DB) 6.81 mg/dL); elevation of hepatic cytolysis enzymes (aspartate aminotransferase (AST) 862 U/L – 32 times above the upper limit of normal – and glutamate-pyruvate transaminase (ALT) 317 U/L - 9 times above the upper limit of normal); normal albumin (3.3 g/dL); INR of 1.00; antibodies for HIV-1 positive; anti-HBc and HBs negative; anti-HCV negative; anti-HAV IgM negative and IgG positive. Abdominal ultrasound (Fig. 1) showed hepatomegaly (17.5 cm in diameter at the mid-clavicular line), with the parenchyma being globally homogenous and with increased echogenicity, with no other changes of relief. She was hospitalized for acute hepatitis of unknown cause.

During the first 4 days of hospitalization the patient presented progressive aggravation of hepatic cytolysis (AST 4042 U / L and ALT 1050 U / L, always maintaining a AST approximately 3 times greater than ALT) and, until the 13th day of hospitalization, worsening of hepatic cholestasis parameters (maximum values of TB 19.13 mg / dL and DB 17.6 mg / dL). Transient changes in liver function were observed between the 4th and 9th day of

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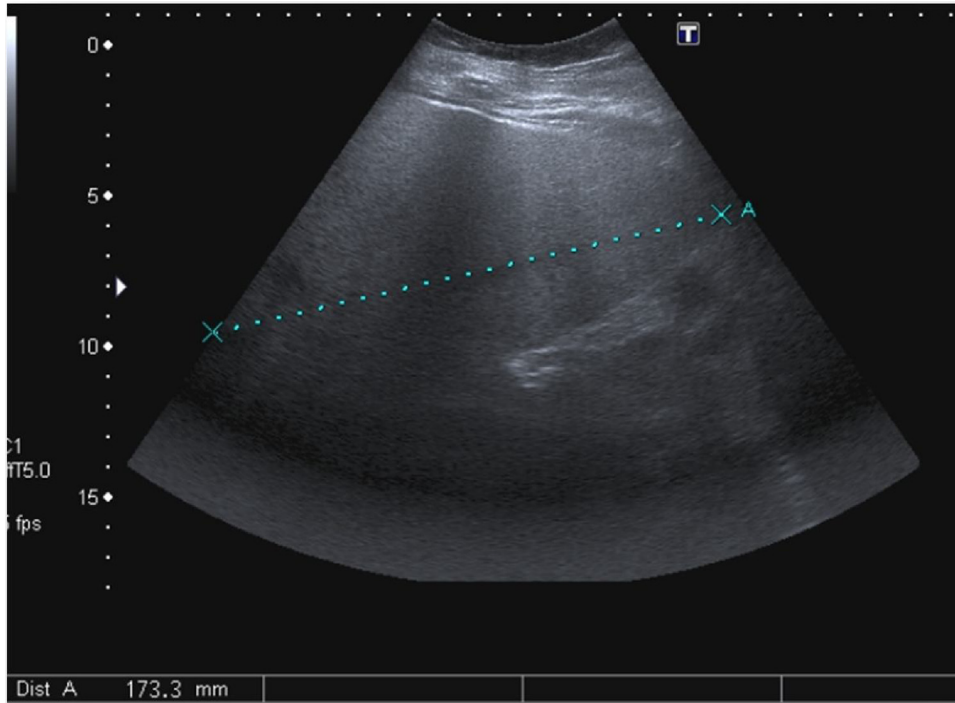


Fig. 1. Abdominal ultrasonography showing hepatomegaly (17.5 cm in diameter at the mid-clavicular line).

hospitalization, with hypoalbuminemia most abnormal value - 2.6 g / dL) and changes in coagulation parameters (most abnormal value of INR - 1.69). The patient remained asymptomatic throughout the hospitalization and objectively only presented worsening jaundice of the skin and mucous membranes. Of the remaining analytical study carried out during hospitalization: CD4 + T lymphocytes 388 cells / mL and HIV RNA polymerase chain reaction (PCR) 54,652 copies / mL. On the 10th day of hospitalization, for diagnostic clarification, a percutaneous liver biopsy was performed and blood was collected for HCV PCR evaluation, in spite of anti-HCV negative. Due to the clinical and analytical improvement (AST 103 U / L, ALT 52 U / L, TB 11.78 mg / dL, DB 11.16 mg / dL, albumin 3.8 g / dL and INR 0.92), patient was discharged on the 17th day of hospitalization.

At the re-evaluation internal medicine appointment, about one week after discharge, the HCV RNA PCR collected during hospitalization was already available and was > 10,000,000 IU / mL. The hepatic biopsy revealed irregular expansion of portal spaces by moderate inflammatory lymphocytic infiltrate with formation of lymphoid aggregates and rare associated neutrophils, with no evidence of plasma cells; proliferated bile ducts, but apparently not involved by the inflammatory process; slight portal fibrosis, with thin septa surrounding individual hepatocytes; interface necrosis of moderate intensity; intralobular necro-inflammatory foci of mild to moderate intensity; ballooned hepatocytes with reticulation and numerous Mallory-denk hyaline bodies and intense mixed steatosis with xanthelasmic hepatocytes; cholestasis in sinusoidal and portals Kupffer cells, minimal in hepatocytes; no epithelioid granulomas were identified; and absence of signs of malignancy. These findings were compatible with active toxic / alcoholic steatohepatitis. New serum samples for anti-HCV was obtained and demonstrated seroconversion to positive. In view of the presented, the diagnosis of acute HCV hepatitis with risk factor of heterosexual transmission was established. The virus genotype, subsequently determined, was the 3a, the same as that of his sexual partner. The patient started antiretroviral therapy for HIV infection and presented spontaneous

clearance of HCV, with undetectable HCV RNA PCR about 11 weeks after discharge from hospital.

Discussion

HCV infection contributes to approximately 15% of symptomatic acute hepatitis, with the vast majority of cases of acute HCV infection being relatively benign and not detectable in more than two-thirds of cases [1-3]. In cases of symptomatic infection, the most frequent manifestations include, in descending order of frequency: jaundice, bilirubinuria and light colored stools, nausea and abdominal pain [4]. Other symptoms that may arise include: fatigue, fever, anorexia, pruritus and myalgias.

Analytically, AST and ALT, although oscillating, can reach values greater than 10 to 20 times the upper limit of normal. This increase normally exhibits an ALT > AST ratio and usually precedes the appearance of symptomatology and anti-HCV positivity. [5] These cytotoxic changes may be accompanied by an elevation of TB and DB and rarely by hepatic dysfunction. The HCV RNA can be detected by PCR from a few days to 8 weeks after exposure to the virus and the anti-HCV seroconverts about 8 weeks after exposure [6-8]. This patient had, therefore, atypical analytical parameters for an acute HCV infection, presenting with liver dysfunction and AST values that were higher than ALT, reason for which toxic hepatitis was initially suspected.

Thus, in the case of this patient we can conclude that the infection was detected in the window period, prior to seroconversion. In fact, the existence of HCV RNA by PCR in the presence of anti-HCV that seroconverts to positive within a period of approximately 12 weeks is considered a definitive proof of acute HCV infection. The fact that hepatic cytolysis enzymes have decreased or tended to normalize, as occurred during the period of hospitalization of this patient, does not necessarily mean that the infection will resolve spontaneously. In fact, although some studies reveal spontaneous viral clearance around 50% [9-14], and others reveal that symptomatic patients are more likely to spontaneous clearance [15,16], the truth is that acute phase provide an

opportunity for early treatment of patients before they progress to chronicity.

Regarding the route of transmission, the parenteral route, especially in intravenous (IV) drug users has been the most frequent, with rates of anti-HCV positivity in users of IV drugs ranging from 60 to 80% [17]. On the other hand, the risk of sexual transmission, although it may occur, seems to be very low, estimating an incidence of HCV infection by sexual transmission of 0.07% per year [18]. However, the risk appears to be higher in multi-partner heterosexual relationships and in men who have sex with men (MSM) [19,20]. HIV co-infection may potentiate the risk of transmission, especially in MSM. Explanations that have emerged for this finding include: higher HCV viral loads, longer HCV half-life, and higher rates of HCV in semen [5].

Conclusion

The present case demonstrated to be an acute HCV hepatitis of atypical characteristics, presenting a clinical, analytical and histological profile suggestive of toxic / alcoholic hepatitis. We emphasize, therefore, the need to weigh this differential diagnosis when approaching a patient with acute hepatitis, especially in cases of high degree of suspicion.

Conflicts of interest

The authors declare that they have no conflicts of interest.

Author contributions

Cátia Dias: Conceptualization; Investigation; Project administration; Writing original draft; Review and editing.

Sara Pipa: Investigation; Writing original draft.

Margarida Mota: Conceptualization; Investigation; Project administration; Writing original draft; Review and editing.

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