## Autoimmune hepatitis (HAI) is likely induced by Epstein Barr Virus (EBV) infection

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**Introduction and Objectives:** HAI is an immune-mediated chronic inflammatory liver condition of uncertain etiology. There are genetic factors and triggering agents such as toxicity, infections, and medications, among others.

**Case summary:** An 18-year-old woman with nausea, vomiting, abdominal pain and jaundice, positivity for Hepatitis A IgM (IGM-HAV). PCR SARS COV 2 negative, creatinine 0.56, FA 297, GGT 463, DHL 756, INR 1.4 BT 5.32, BI 2.87, BD 2.45, ALB 3.57, AST 136, ALT 135, Hb 8.9, Neutrophils 500. Hematology concludes with hemophagocytic syndrome (SH). HCV AND HBV negative, IGG 1560, ANTI DNA 108, ANA 1:80, IGM-HAV reactive, EBV 29.9125 copies/ml. Cyclosporine is administered by SH. 10 months after she is assessed in the liver clinic for the persistence of transaminasemia. By ultrasound hepatosplenomegaly, without dilation of the bile duct. Liver biopsy reported inflammatory infiltrate of periportal predominance with interface activity, macrovesicular steatosis, without fibrosis, without hemophagocytosis, with biochemical and histological data compatible with HAI with a simplified score of 7 points. (Fig. 1).

**Discussion:** HAI is associated with positive autoantibodies, hypergammaglobulinemia and necro inflammatory features in histology. HAV and EBV can induce HAI, as it induces autologous antibodies against triose phosphate isomerase. The patient has complicated EBV infection with SH and persistence of IGM-HAV for 11 months. Liver biopsy with autoimmune hepatitis data, probably as a result of EBV infection and false positive for IgM-HAV for EBV coinfection.

**Conclusion:** A woman with EBV, probable false-positive HAV and EBV-induced HAI is reported.

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**Declaration of interest:** The authors declare no potential conflicts of interest.

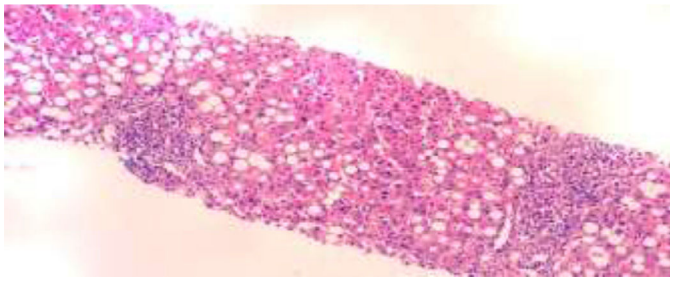

Figure 1. Liver histological cut with hematoxylin eosin 100x. predominantly lymphoid, moderate, portal inflammation with interphase and lobular activity in addition to moderate macrovesicular steatosis.

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## Reactivation autoimmune hepatitis report of two cases

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**Introduction and Objectives:** To present two clinical cases of patients with autoimmune hepatitis (AIH). After infection by SARS-COV2, presented reactivation of the disease.

**Materials and methods:** 42-year-old female with a history of celiac disease, choledocholithiasis, Arterial hypertension and CACU. Autoimmune hepatitis since 2012 treated with Prednisone, ursodeoxycolic acid and mycophenolic Ac. In March 2022, she presented infection by SARS COV-2 and relapse of AIH due to elevated transaminases; remission was reinduced with prednisone, showing biochemical improvement

48-year-old male history of psoriasis diagnosed with AIH in 2018 under treatment with Prednisone and Azathioprine. In February 2022, he presented a serious infection by SARS-Cov 2, restarting the remission reinduction scheme with prednisone and Azathioprine.

**Discussion:** In the bibliography consulted, there are no reports about the reactivation of the disease after infection by SARS-CoV-2, although there is a case report for autoimmune hepatitis and an autoimmune hepatitis overlap syndrome/primary biliary cholangitis triggered by COVID-19.

**Conclusions:** The spectrum of affectations after the pandemic by SARSCOV-2 is still wide, so we consider it important to expose these cases where the history of the infection in the face of an exacerbation by SARSCOV-2; in our experience, remission was reinduced with prednisone and azathioprine of according to international schemes, with good response from patients. We consider it important to report these cases since there is an association between AIH and viral infections such as Epsteinbar, so there may be a clear association between Sarc-cov2 infection and relapse.

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**Table 1**. Biochemical characteristics of the two patients

| Patient 1 Date | AST | ALT | IgG | Alkaline phosphatase | BT | platelets |
|---|---|---|---|---|---|---|
| 04.11.21 | 26 | 48 | 2765 | 101 | 0.5 | 233 |
| 10.03.22 | 756 | 1204 | 4276 | 183 | 4.6 | 200 |
| 24.03.22 | 281 | 800 | 4544 | 174 | 2.7 | 35 |
| Patient 2 | | | | | | |
| 25.11.21 | 102 | 130 | 2292 | X | 1.1 | 85 |
| 28.03.22 | 638 | 731 | 3577 | 138 | 10.1 | 94 |

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## Overlay of autoimmune cholangitis and autoimmune hepatitis

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**Introduction and Objectives:** The "overlap syndrome" is a variant of autoimmune hepatitis (AIH) in addition to cholestatic liver disease. AIH can present concurrently with primary biliary cholangitis (PBC) 7% to 13%, primary sclerosing cholangitis (PSC) 6% to 11% or autoimmune cholangitis (AIC) 3% to 9%, the rarest and associated with a poor prognosis. Diagnosis requires biochemical alteration, immunological studies and biopsy, plus the exclusion of viral, toxic, metabolic and hereditary etiologies. Therapy, including corticosteroids, ursodeoxycholic acid and