Post-COVID-19 Cholestatic hepatitis
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Post-COVID-19 Cholestatic Hepatitis. Do we know it all?

Introduction:

- In addition to the pulmonary consequences, the incidence of liver injury is being reported.
- understanding the hepatotropism of SARS-COV-2 is of paramount importance as it can lead to a more severe COVID-19 course.

Case Presentation:

A 49-year-old lady with a history of seizure disorder, migraines, hypertension, and recent six-week ICU admission for COVID illness requiring mechanical ventilation (ECMO), presented to our gastroenterology clinic for a post-discharge follow-up. During admission, she consistently had an abnormal elevation of liver enzymes (Peak ALP 2000, AST, ALT 300, Bilirubin 2.5). MRCP was normal, and a liver biopsy showed intralobular bile duct injury showing cytologic atypia, periductal edema, periductal-intraductal neutrophilic/ lymphocytic inflammation, focal mild hepatocellular cholestasis, Kupffer cell hyperplasia. She had no history of chronic liver disease, and LFT was normal at baseline. Post-discharge LFT showed alkaline phosphatase of 1514 with total bilirubin 1.4. Infective (Hepatitis panel), Inflammatory/ Autoimmune (ANA, ASMA, AMA, P-ANC, Anti-SLA/LP, Anti ds-DNA, ALKM-1, and ALKM-3) workup was negative. Repeat imaging with USG and MRI was unremarkable. She received a course of prednisone after discharge with no improvement in LFT; hence it was tapered off. She is currently asymptomatic six months after acute illness. However, She continues to have persistently elevated liver enzymes with a gradual downtrend, the latest being ALP 490, AST 86, ALT 95, and T. Bilirubin 0.8.

Discussion:

- Only six cases reported to date.
- Largely Asymptomatic.
- Persistently elevated liver biochemistry with unclear etiology despite extensive workup.
- A confluence of SSC-CIP (Secondary Cholangitis of Critically Ill Patients) and direct hepatic injury from COVID-19 is the suspected pathophysiology.
- ACE2 is expressed primarily in cholangiocytes, which has been suggested as the entry point for hepatobiliary damage.
- SARS-CoV-2 DNA has been isolated from postmortem livers, and electron microscopy has demonstrated viral particles within hepatocytes with viral cytopathic effects.
- **More research** is warranted regarding this syndrome because it has been implicated in ongoing liver damage severe enough to warrant liver transplantation.
- Ursodeoxycholic acid and obeticholic acid can improve symptoms of cholestatic liver disease.

SCAN ME

Thank you! :)

Questions?
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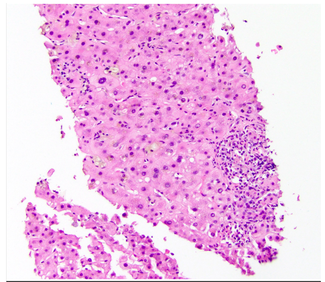
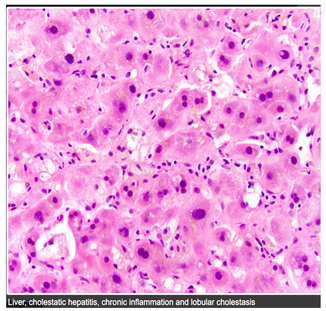
Histology:



Liver, cholestatic hepatitis, chronic inflammation and lobular cholestasis following amoxicillin / clavulanate use.



Liver, cholestatic hepatitis, chronic inflammation and lobular cholestasis

References:

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- 2. Da BL, Suchman K, Roth N, Rizvi A, Vincent M, Trindade AJ, Bernstein D, Satapathy SK; Northwell COVID-19 Research Consortium. Cholestatic liver injury in COVID-19 is a rare and distinct entity and is associated with increased mortality. J Intern Med. 2021 Aug;290(2):470-472. doi: 10.1111/joim.13292. Epub 2021 Apr 23. PMID: 33786906; PMCID: PMC8250628.

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