

HENRY De Novo Autoimmune Hepatitis Following COVID Vaccination: A Case Series

FORD HEALTH

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Introduction

- We present a case series of patients with de novo autoimmune hepatitis following COVID vaccination.

Case Presentation #1

- A 68-year-old female with a past medical history of GERD and diverticulitis presents with the sudden onset of dark urine three days after receiving the second Moderna COVID vaccine (5/2021). This is followed by right upper quadrant pain, jaundice, nausea, vomiting, and acholic stools. She denies any other associated symptoms. She endorses a family history of rheumatoid arthritis but denies any family history of liver disease/cancer.
- The patient is admitted and is found to have AST: 1,650, ALT: 1,604, alkaline phosphatase: 225, and total bilirubin: 4.1. Labs include positive IgG: 2,160 and positive ANA.
- Liver biopsy reveals intense lymphocytic, plasmacellular, eosinophilic, and neutrophilic hepatitis with bridging necrosis. Trichrome stain shows portal/periportal fibrosis.
- These findings are consistent with autoimmune hepatitis, and she is subsequently started on mycophenolate mofetil (MMF) and prednisone with improvement in her liver enzymes and symptoms.

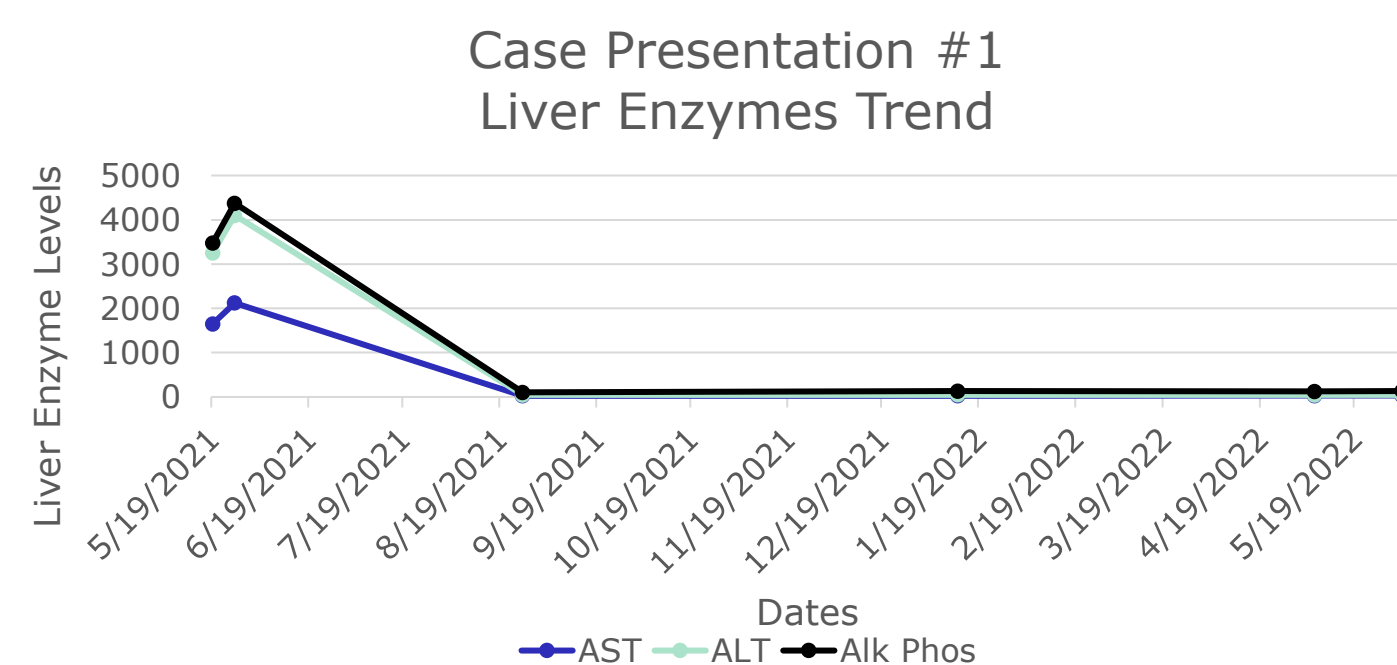


Figure 1: Graph displaying patient's liver enzyme levels over time. Down-trending liver enzymes noted after patient is started on prednisone in 6/2021. MMF is added in 9/2021 with further improvement of elevated liver enzymes.

Case Presentation #2

- A 43-year-old female with a past medical history of keratoconus presents to the clinic (5/2021) with painless jaundice for one week. She endorses feeling fatigued as well for the past three months after receiving her second Moderna COVID vaccine. She denies any other associated symptoms. She endorses occasional alcohol use and denies any family history of liver disease/cancer or autoimmune disease. Her home medications include oral contraceptives and ibuprofen.
- Laboratory evaluation is remarkable for AST: 579, ALT: 800, alkaline phosphatase: 130, and total bilirubin: 6.7.
- MRI/MRCP is unremarkable for biliary obstruction or cirrhosis.
- She is found to have anti-smooth muscle antibody titers of 1:160 and IgG of 1,629.
- Liver biopsy reveals lymphoplasmacytic infiltrate with eosinophils, interface hepatitis, triaditis, necroinflammation with necrosis, and periportal septate fibrosis.
- The patient is diagnosed with autoimmune hepatitis and is started on MMF and prednisone with clinical improvement.

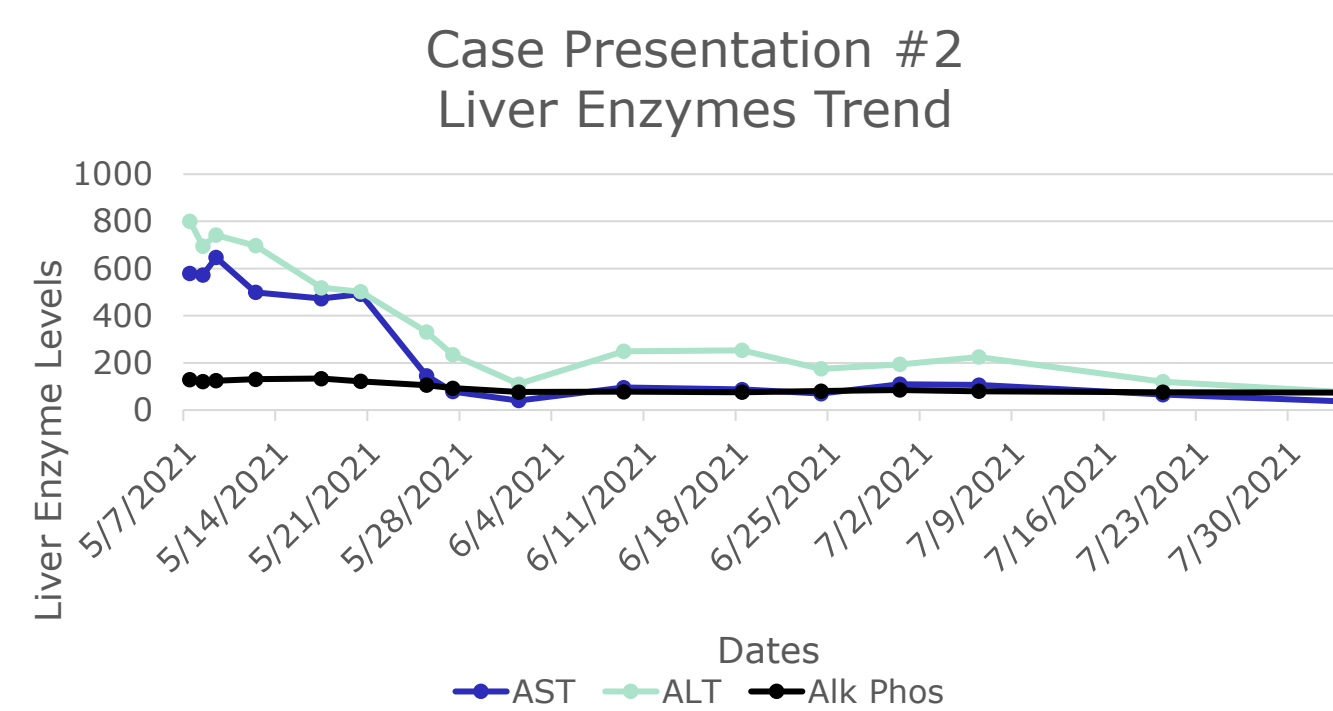


Figure 2: Graph displaying patient's liver enzyme levels over time. Down-trending liver enzymes noted after patient is started on prednisone in 5/2021. MMF is added in 7/2021 with further improvement of elevated liver enzymes.

Discussion

- These cases demonstrate that COVID vaccination may play a role in inciting de novo autoimmune hepatitis in some patients. This can be a challenging situation for many clinicians to navigate, as COVID remains a significant threat to patients' health.
- Patients with autoimmune risk factors may benefit from closer laboratory evaluation and monitoring for any symptoms surrounding COVID vaccination.

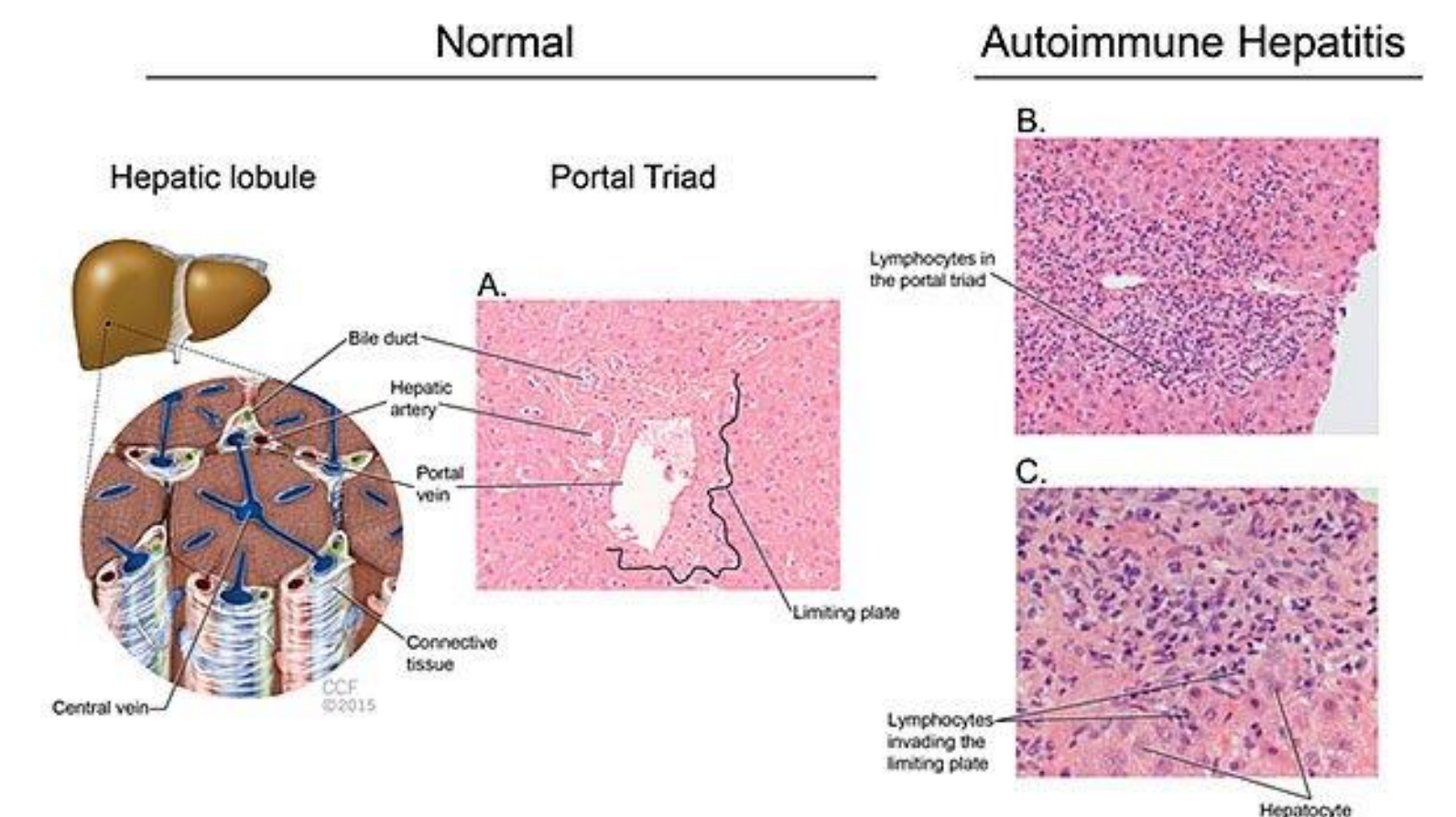


Figure 3: Histological findings associated with autoimmune hepatitis. [1]

References

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