

Introduction

- We present a case series of patients with autoimmune hepatitis experiencing a flare following COVID vaccination.

Case Presentation #1

- A 62-year-old male presented to the clinic with right upper quadrant pain associated with elevated liver enzymes. This patient's lab and liver biopsy results were consistent with autoimmune hepatitis. He remained stable on mycophenolate mofetil (MMF) for nine years without any acute flares.
- However, two weeks after receiving the first COVID Pfizer vaccine, the patient presented with jaundice and severely elevated liver enzymes - AST: 830, ALT: 1,450, and total bilirubin: 7.6. He was subsequently hospitalized and required IV solumedrol for seven days. The patient was transitioned to oral steroids and his liver enzymes normalized within a month.

Case Presentation #2

- A 41-year-old female with a past medical history of lupus was found to have elevated liver enzymes on yearly labs. This patient's lab and liver biopsy results were consistent with autoimmune hepatitis. She was responsive to a stable regimen of prednisone and MMF for eight months.
- However, three weeks following her fourth COVID Pfizer vaccine, her routine labs exhibited AST: 344, ALT: 464, and alkaline phosphatase: 265. These values were a significant increase from normal the month before. This necessitated up-titration of prednisone and MMF, which normalized her liver enzymes within two months.

Case Presentation #3

- A 67-year-old female with a past medical history of hypothyroidism was found to have elevated liver enzymes associated with fatigue. Further lab work-up and liver biopsy revealed autoimmune hepatitis. This patient's autoimmune hepatitis was controlled on a regimen of prednisone and MMF for six months.
- However, three weeks after receiving the third COVID Pfizer vaccine, this patient's labs exhibited AST: 99 and ALT: 105. These values were a significant increase from her baseline the month before. Her immunosuppressants were up-titrated with an increase in MMF and the addition of cyclosporine. Her labs improved to AST: 73 and ALT: 87 within two months.

Figures

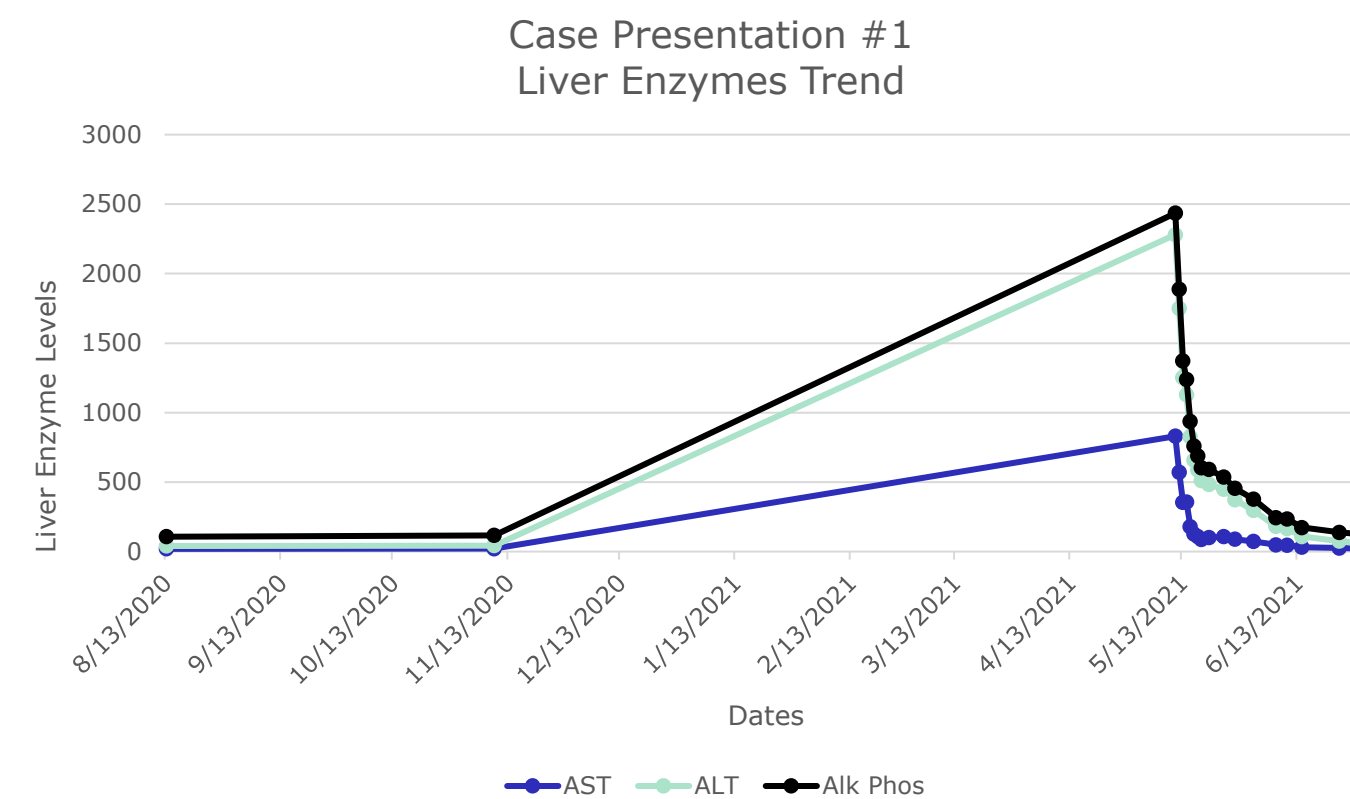


Figure 1: Graph displaying patient's liver enzyme levels over time. Elevation in liver enzymes can be seen following COVID vaccine in 5/2021 with subsequent improvement following steroid administration.

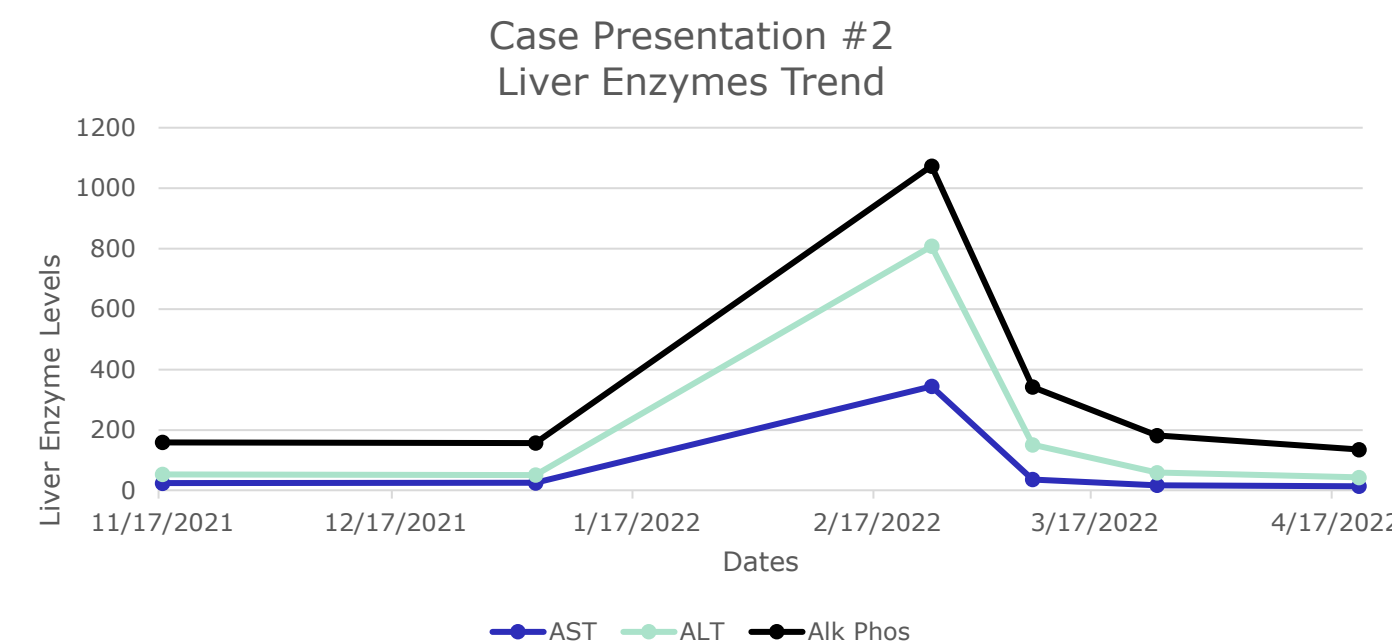


Figure 2: Graph displaying patient's liver enzyme levels over time. Elevation in liver enzymes can be seen following COVID vaccine in 1/2022 with subsequent improvement following up-titration of prednisone and MMF.

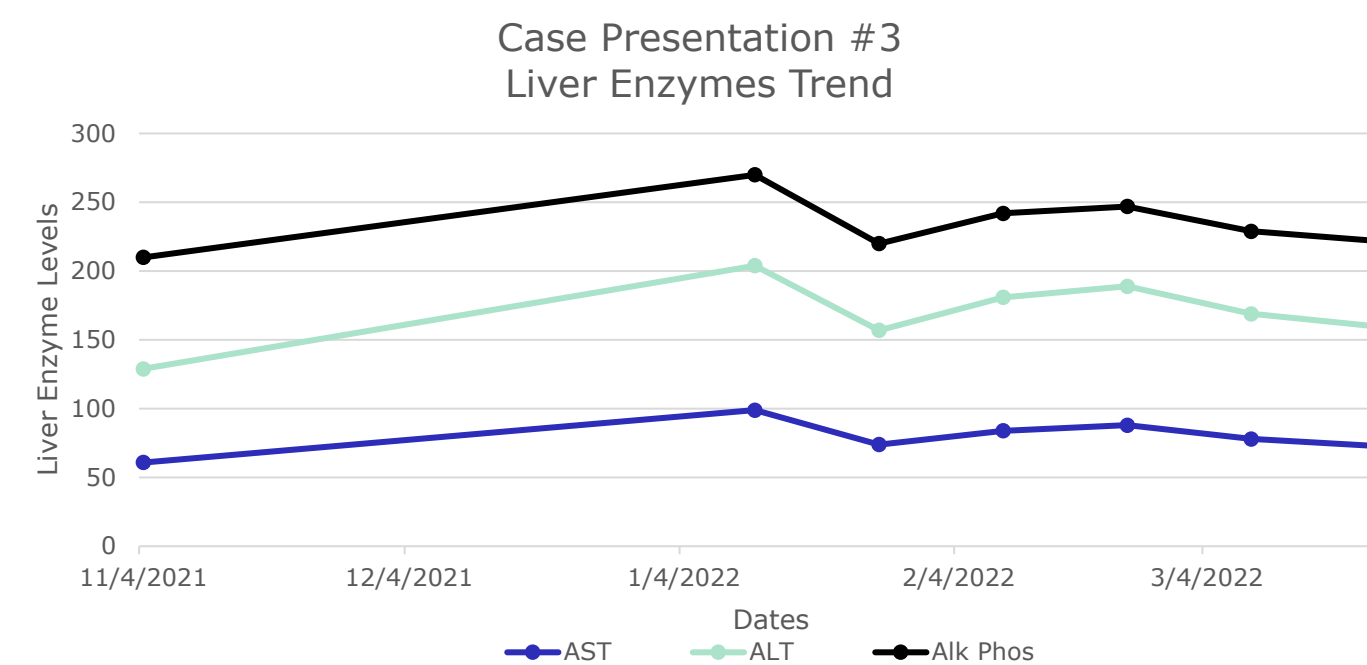
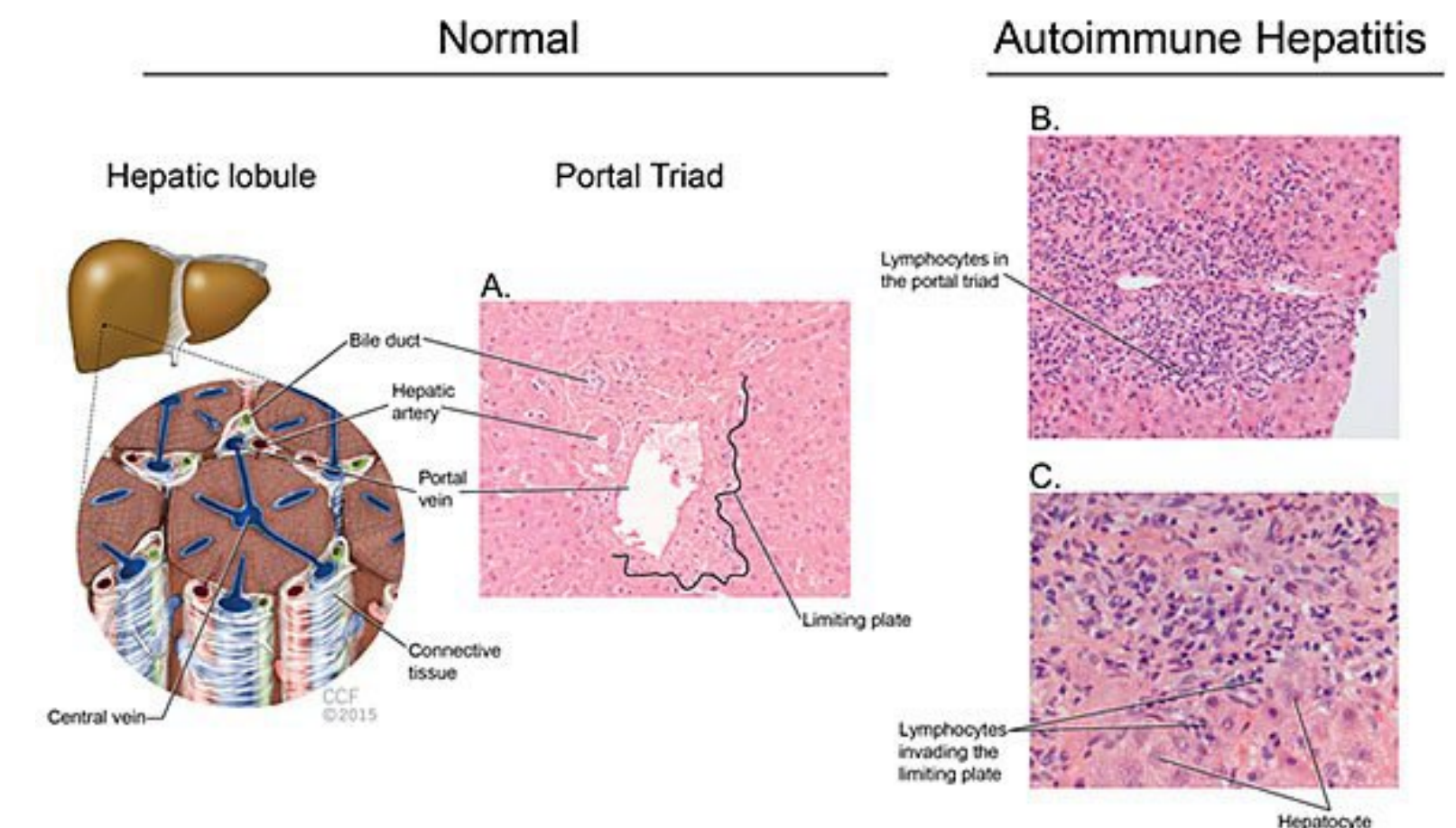


Figure 3: Graph displaying patient's liver enzyme levels over time. Elevation in liver enzymes can be seen following COVID vaccine in 1/2022 with subsequent improvement following increase in MMF and addition of cyclosporine.

Discussion

- These cases demonstrate that COVID vaccination may play a role in autoimmune hepatitis flares. This can be a challenging situation for many clinicians to navigate, as COVID remains a significant threat to patients' health, and there are many case reports that show that COVID infection itself can precede a flare.
- Patients with autoimmune liver disease may benefit from closer laboratory evaluation surrounding COVID vaccination.



References

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