CONTACT

Omar Saab, MD NewYork Presbyterian Queens Hospital. Email: ons9006@nyp.org Phone: (929) 468-6058

It is established that SARS COV 2 infection is associated with many autoimmune processes, especially in predisposed patients, such as autoimmune hepatitis AIH [1,2]. Molecular mimicry is one of the suggested mechanisms behind such phenomena.

acetaminophen use. 21 days before admission. significant ductal pathology.

A Case of Autoimmune Hepatitis after Sars-Cov-2 Vaccination in a Patient with Ulcerative Colitis

Omar Saab, MD¹; Marwah Algodi, MD² ; Ahmed Gemei, MD³ ; Syed Hussain, MD³ ¹NewYork Presbyterian Queens Hospital - Department of Medicine, ²Ibn Al-Nafees Hospital, ³NewYork Presbyterian Queens Hospital - Gastroenterology Department. (Additional author support: Zhi Alan Cheng, MD³; Constantine Fisher, MD³)

INTRODUCTION

CASE PRESENTATION

• A 55 year old Hispanic male with ulcerative colitis on home sulfasalazine presented to the ED with

complaints of dull RUQ abdominal pain of 3 weeks' duration. ROS otherwise negative

• Patient's social history was unremarkable. No recent travel, occupational exposures, herbal supplement or

• Received 2 doses of Pfizer Comirnaty, last dose was

• Vital signs were normal, physical examination was remarkable for jaundice and mild RUQ tenderness. Laboratory values: Liver Function Tests: AST/ALT 1621/1476 U/L, T. bilirubin 6.0 milligrams per deciliter mg/dL, D.bilirubin 4.5 mg/dL, Alkaline phosphatase 167 U/L, GGT: 339, ESR: 99 mm, CRP: 3.40 mg/dL. Imaging: Abdominal ultrasound and MRI were unremarkable. EUS showed diffuse abnormal echotexture in the visualized portion of the liver. No

 Hospital course: Patient was fully recovered with standard treatment of prednisone taper initialed at 60 mg daily and azathioprine. His home dose of sulfasalazine was continued during his treatment. Liver marker normalized over two month.









Figure 2

EUS, PATHOLOGY & LFTs TREND

global use of vaccination. patients for AIH. autoimmune disease.

COVID-19 vaccine-induced AIH is an uncommon association. Physicians should be diligently alert and watchful for AIH in patients who present with liver injury following vaccination especially in those with ulcerative colitis and possibly more broadly in other autoimmune conditions. Fortunately, COVID-19 vaccineinduced AIH has a favorable outcome when treated with immunosuppressive therapy (azathioprine and prednisone). These rare associations should not defer individuals from getting vaccinated, as the benefits of vaccination far outweigh the risks.

75(1), 222–224. https://doi.org/10.1016/j.jhep.2021.04.003 https://www.frontiersin.org/articles/10.3389/fmed.2021.582620/full https://doi.org/10.1016/j.jhep.2021.05.038 doi:10.1016/j.jhep.2021.06.004

DISCUSSION

• Few case reports of elevated liver enzymes despite widespread,

• The increasing number of case reports postulating autoimmune processes after SARS COV 2 infection or vaccination may allow for more data analysis to determine risk factors that predispose

• It is possible that patients with pre-existing autoimmune diseases are more vulnerable to develop autoimmunity after exposure to spike-protein based COVID-19 vaccines.

• A recent case series noted that out of 32 patients who developed AIH after COVID-19 vaccination, about 28.1 % had an underlying history of autoimmune disease. [7]

 More data are needed to strengthen possible association between SARS COV 2 infection and/or vaccination and

CONCLUSIONS

REFERENCES

1. Bril, F., Al Diffalha, S., Dean, M., & Fettig, D. M. (2021). Autoimmune hepatitis developing after coronavirus disease 2019 (COVID-19) vaccine: Causality or casualty? Journal of Hepatology,

2. Ehrenfeld, M., Tincani, A., Andreoli, L., Cattalini, M., Greenbaum, A., Kanduc, D., Alijotas-Reig, J., Zinserling, V., Semenova, N., Amital, H., & Shoenfeld, Y. (2020). Covid-19 and autoimmunity. Autoimmunity Reviews, 19(8), 102597. https://doi.org/10.1016/j.autrev.2020.102597

3. Vojdani, A., & Kharrazian, D. (2020). Potential antigenic cross-reactivity between SARS-CoV-2 and human tissue with a possible link to an increase in autoimmune diseases. Clinical Immunology (Orlando, Fla.), 217, 108480. https://doi.org/10.1016/j.clim.2020.108480

4. Frontiers | Case Report: Viral Pneumonia Could Prompt the Advancement of Immune-Mediated Liver Disease | Medicine. (n.d.). Retrieved November 11, 2021, from

5. Rocco, A., Sgamato, C., Compare, D., & Nardone, G. (2021). Autoimmune hepatitis following SARS-CoV-2 vaccine: May not be a casuality. Journal of Hepatology, 75(3), 728–729.

6. Londoño, Maria-Carlota, et al. "Another Case of Autoimmune Hepatitis after SARS-CoV-2 Vaccination - Still Casualty?" Journal of Hepatology, vol. 75, no. 5, Nov. 2021, pp. 1248-49,

7. Chow, K. W., Pham, N. V., Ibrahim, B. M., Hong, K., & Saab, S. (2022). Autoimmune Hepatitis-Like Syndrome Following COVID-19 Vaccination: A Systematic Review of the Literature. Digestive diseases and sciences, 67(9), 4574–4580. https://doi.org/10.1007/s10620-022-07504-w