

AZD-1222

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Autoimmune hepatitis type 1: case report

A 79-year-old man developed autoimmune hepatitis (AIH) type 1 following vaccination with AZD-1222 [*dosage and route not stated*].

The man was admitted to the emergency room on 1 September 2021 with right upper quadrant abdominal pain associated with pruritus, jaundice, choluria and acholia for duration of 3 months. He was not taking any concomitant medications. He received the AZD-1222 [ChAdOx1 nCoV-19 vaccine] on 9 May 2021 and developed the above symptoms 15 days after the first dose. Despite clinical manifestations, he received the second dose of AZD-1222 on 5 August 2021. On admission (on 1 September 2021), examination showed conjunctival and soft palate jaundice as well as generalised yellow pigmentation of the skin and mild abdominal tenderness in the right upper quadrant without other significant findings. The blood test showed mixed hyperbilirubinaemia with direct bilirubin predominance and elevated transaminases. Additionally, he had mild lymphopenia with normal leucocyte and platelet counts. The abdominal ultrasound revealed oedema of the gallbladder walls. A venous doppler revealed increased portal diameter and elevated portal flow velocity. The upper gastrointestinal endoscopy revealed oesophagitis and chronic antral gastritis. Additionally, the cholangioresonance revealed no biliary obstruction nor any additional relevant findings. The laboratory findings revealed positive anti-smooth muscle antibodies, low titer anti-nuclear antibodies and elevated IgG. After receiving both the doses of vaccination, the anti-severe acute respiratory syndrome coronavirus-2 total antibodies were elevated.

The man underwent immunomodulatory management and was discharged on 9 September 2021. On 20 September 2021, the liver biopsy revealed focal cholestasis and lobulation of the parenchyma, marked ductular proliferation as well as lymphocytic infiltrate in the portal spaces with the presence of eosinophils, corresponding to a necroinflammatory hepatitis grade 2 with focal cholestasis. The immunohistochemistry staining showed numerous T CD3⁺ cells interspersed with a few B CD20⁺ cells. Based on the clinical presentation and laboratory findings, AIH type 1 secondary to the AZD-1222 vaccination was considered. Thereafter, he was treated with hydrocortisone. His treatment was then switched to prednisone, and azathioprine therapy was also started. After 9 days of treatment, he showed a progressive decrease in the level of liver enzymes and a significant improvement in symptoms, including fatigue, pruritus and jaundice was noted. Thereafter, he started receiving tapering dose of prednisolone. On follow-up (on 11 October 2021), his clinical condition continued to improve along with his liver enzymes.