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Case Report

# Anti-Programmed Cell Death-Ligand-1 Immunotherapy-Related Secondary Sclerosing Cholangitis

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## 1. Abstract

An 86-year-old woman presented with epigastric pain and anorexia. She was diagnosed with lung adenocarcinoma and was prescribed atezolizumab 20 days earlier. Her data showed a cholestatic-type liver dysfunction. We observed the typical characteristics of sclerosing cholangitis on computed tomography and magnetic resonance cholangiopancreatography (MRCP), including wall thickening, multifocal strictures, and segmental dilatations of the bile duct. She was diagnosed with immune therapy-related secondary sclerosing cholangitis and treated with prednisolone; however, liver function and MRCP findings worsened over time. When a patient receiving atezolizumab develops immune therapy-related hepatitis, secondary sclerosing cholangitis should be considered among the differential diagnosis.

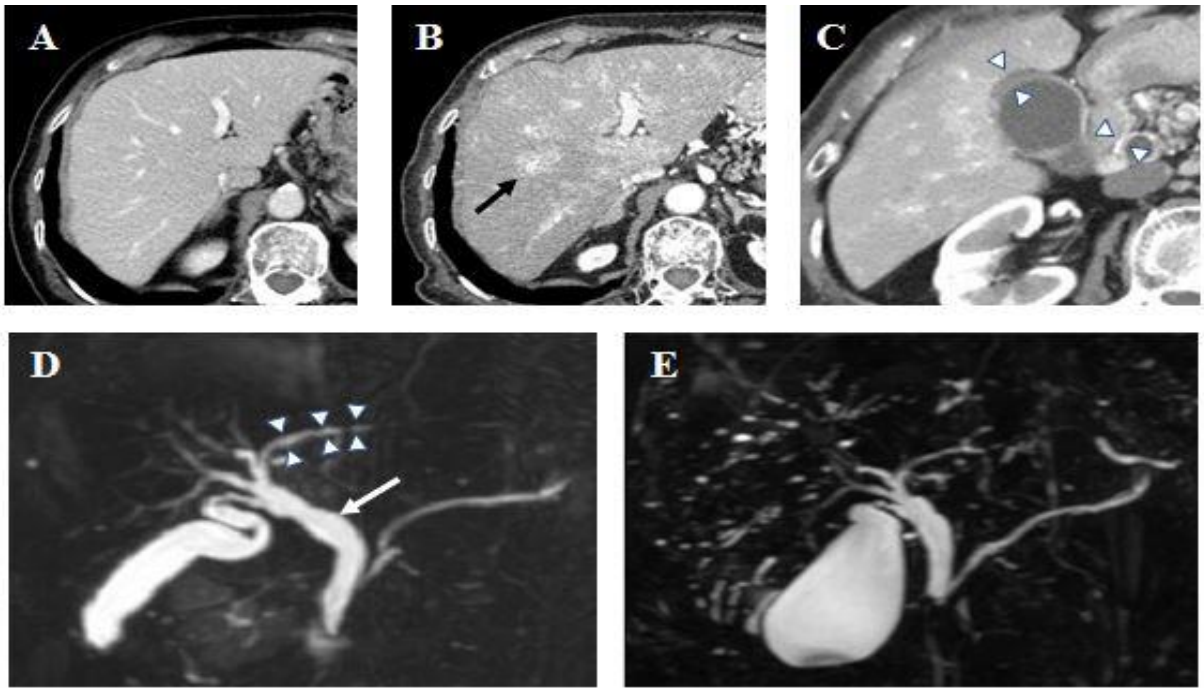


**Figure 1. Results of Abdominal CT (A–C) and MRCP (D, E) Imaging**
Images A–C show abdominal CT results before atezolizumab therapy (A) and at the onset of cholangitis (B, C). The latter images show unevenly enhanced liver parenchyma (arrow) and wall thickening with contrast enhancement in the gallbladder and extrahepatic bile duct (arrowhead). Images D and E show the results of MRCP at onset (D) and at 2 months after the onset (E), with evidence of multifocal strictures and segmental dilatations of the intrahepatic bile duct (arrowhead) and dilatation of the extrahepatic bile duct (arrow). The findings in image E are more conspicuous than those in image D. Abbreviations: CT, computed tomography; MRCP, magnetic resonance cholangiopancreatograph0079

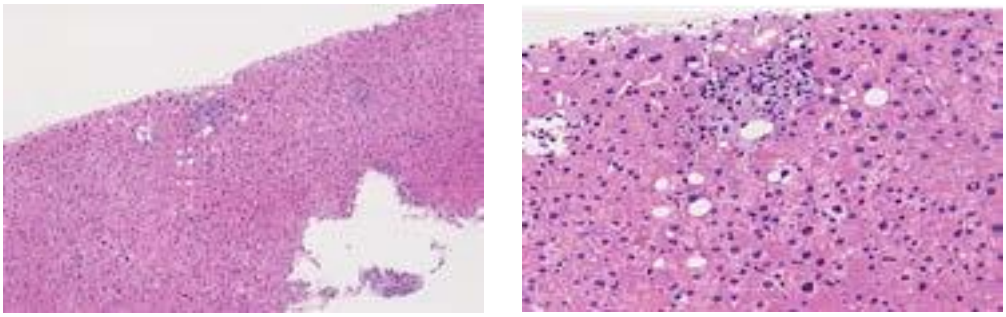

**Figure 2. Histopathology of the Liver** There is evidence of mild-to-moderate periportal inflammation (arrow) and focal lobular necrosis (arrowhead). (Hematoxylin and eosin staining)

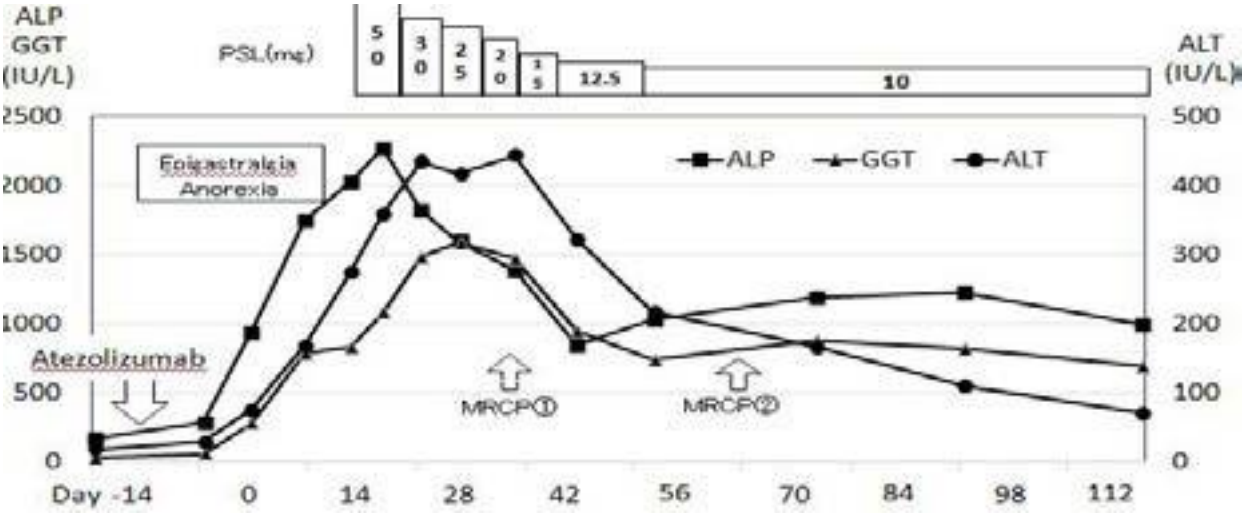


**Figure 3. Summary of the clinical course and biochemical analyses.** Abbreviations: MRCP, magnetic resonance pancreatography; PSL; predonisolone, ALP, alkaline phosphatase; GGT, γ-glutamyl transferase; ALT, alanine aminotransferase.