中文題目：降血脂藥物誘發自體免疫性肝炎案例報告

英文題目：Statin-induced autoimmune hepatitis: a case report

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Introduction: Statins are widely used lipid-lowering medications that may have side effects of muscle pain, increased risk of diabetes mellitus and abnormal liver enzymes. Moreover, it is known that statins have immunomodulatory effects and may be related to the development of autoimmune disorders, including autoimmune hepatitis. Autoimmune hepatitis (AIH) is a chronic inflammatory liver disease of unknown etiology characterized by liver transaminase elevation in the presence of autoantibodies, elevated globulin level, interface hepatitis on histology, and a great response to corticosteroids. AIH is classified into different types on the basis of the serum autoantibody profile. We presented a case who developed type 1 AIH after the administration of statin.

Case presentation: A 69-year-old female with no history of any chronic liver disease presented with fatigue and jaundice for one month. Markedly elevated liver enzyme tests were noted (ALT: 749 U/L, AST: 495 U/L, Total bilirubin: 5.82 mg/dL). She had the history of taking pitavastatin for 2 months, and denied alcohol or herb drugs. Serological testing for viral hepatitis was negative (HAV, HBV, HCV, EBV, CMV), ceruloplasmin and α-1 antitrypsin levels were normal. Tests for antinuclear antibody (ANA, 1:160) and anti-smooth muscle antibody (ASMA, >320x) were positive. The IgG level (1,600mg/dL) was at upper border of normal range (700-1,600mg/dL). An abdominal ultrasound showed a normal homogeneous echo texture of liver and normal spleen size. Subsequent liver biopsy showed interface hepatitis and predominantly lymphoplasmacytic infiltrate. Based on above findings, type 1 AIH triggered by statin was diagnosed and the patient was treated with prednisone 40mg and azathioprine 50mg daily by mouth. She had clinical and laboratory improvement in two weeks. The oral steroid was tapered and stopped within two months. Azathioprine 50mg daily was still used and the levels of liver enzyme tests were all within normal ranges at subsequent follow-up of our OPD for about two years.

Discussion: Even though statins are usually considered to be safe, they may induce severe side effects, including muscular and non-muscular complications. The risk of severe statin-induced hepatotoxicity was reported around 0.001%. Few cases of statin-induced AIH had beed reported and we might consider a possibility a coincidence. Reports that statins up-regulate the toll-like receptors on activated dendritic cells and enhance the secretion of

cytokines could be the association with the etiology of statin-induced AIH. However, the exact pathophysiologic mechanism of AIH is unknown. The dominant hypothesis is that AIH is a disease that develops in genetically predisposed person exposed to environmental triggering factors, such as viral agents or medications.

Conclusion: Autoimmune hepatitis is a chronic inflammatory condition of the liver and may be triggered by various environmental factors, including viruses and drugs in genetically predisposed patients. It is important to diagnose AIH early and differentiate it from other liver diseases because appropriate immunosuppression therapies usually improve the condition and delay or prevent development of hepatic decompensation or the need of liver transplantation.