Asymptomatic Primary Biliary Cholangitis in a Young Patient: An Incidental Finding

Genç Bir Hastada Asemptomatik Primer Biliyer Kolanjit: Rastlantısal Bir Bulgu

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ABSTRACT

Primary biliary cholangitis (PBC) is an autoimmune disease that is increasingly recognized as an important cause of chronic liver disease. Incidental diagnoses are not uncommon. We report a case of a middle-aged female with persistently elevated ALP activity. During the investigation of cholestasis, anti-mitochondrial antibodies (AMA) were detected in her serum. Ductular reaction with cholestasis was observed in the liver biopsy sample. Based on these findings, a diagnosis of PBC was established and ursodeoxycholic acid therapy was commenced. After several weeks of treatment, biochemical improvement was noted.

Key Words: Primary biliary cholangitis, anti-mitochondrial antibodies, ursodeoxycholic acid

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ÖZET

Primer biliyer kolanjit (PBC), giderek artan bir şekilde kronik karaciğer hastalığının önemli bir nedeni olarak kabul edilen bir otoimmün hastalıktır. İnsidental tanılar ise nadir değildir. Sürekli olarak yüksek ALP aktivitesi olan orta yaşlı bir kadın olguyu sunuyoruz. Kolestazın araştırılması sırasında, serumunda anti-mitokondriyal antikorlar (AMA) tespit edildi. Karaciğer biyopsi örneğinde kolestaz ile duktüler reaksiyon gözlendi. Bu bulgulara dayanarak, PBC tanısı konulmuş ve ursodeoksikolik asit tedavisi başlatılmıştır. Birkaç haftalık tedaviden sonra biyokimyasal iyileşme kaydedildi.

Anahtar Sözcükler: Primer biliyer kolanjit, anti-mitokondriyal antikorlar, ursodeoksikolik asit

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INTRODUCTION

Primary biliary cholangitis (PBC) was previously known as primary biliary cirrhosis. Its name was changed from "cirrhosis" to "cholangitis" recently to accurately reflect the inflammatory process, which is essentially dense inflammatory infiltrate around small damaged interlobular bile ductules (1). It is emerging as an important etiology of chronic liver disease and is characterized by a constant elevation of alkaline phosphatase (ALP) activity for more than six months which is accompanied by progressive autoimmune-mediated chronic biliary inflammation, leading to destruction of the intrahepatic biliary tract and cholestasis, which eventually results in liver fibrosis and cirrhosis (2, 3). This disease is predominantly diagnosed among females.

CASE REPORT

An asymptomatic 39-year-old Chinese lady with no known medical illness had her blood analyzed as part of a routine medical checkup. A high ALP level of 399 U/L, a raised alanine transferase (ALT) level of 137 U/L and an elevated gamma-glutamyl transferase (GGT) level of 260 U/L were discovered incidentally. Physical examination showed no features of jaundice or liver disease. Subsequent blood analysis during the second and eighth month of follow-up showed persistently elevated serum ALP and GGT levels, with mildly elevated ALT but normal bilirubin. Viral hepatitis serology was negative and serum alpha-fetoprotein was not elevated. Serum anti-mitochondrial antibodies (AMA) were positive and anti-nuclear antibody test showed a cytoplasmic pattern (Figure 1). Serum IgM was elevated (261 mg/dl), with normal concentrations of serum IgG and IgA.

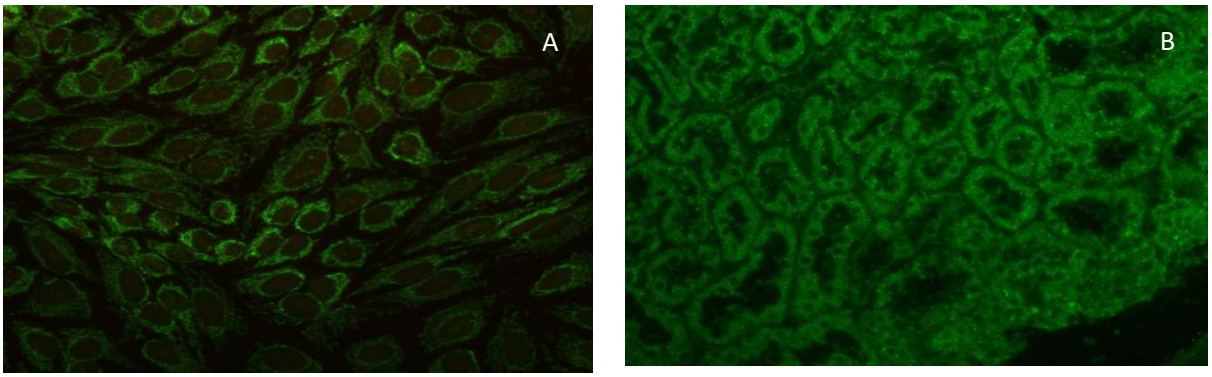

Figure 1: A. Anti-nuclear antibody immunofluorescence on HEp-2 cells showed cytoplasmic pattern. **B.** Anti-mitochondrial antibody immunofluorescence on renal tubular tissue was positive.

Hepatobiliary ultrasound showed no evidence of cirrhosis, intrahepatic or extrahepatic biliary duct dilatation. The visualized gallbladder, spleen and pancreas showed no significant abnormalities. Liver tissue which was taken for histological examination showed a ductular reaction with cholestasis without significant bile duct destruction (Figure 2). Based on these findings, the diagnosis of PBC was established and treatment with ursodeoxycholic acid 250 mg 8-hourly was initiated. The alkaline phosphatase level reduced slightly following a few weeks of treatment.

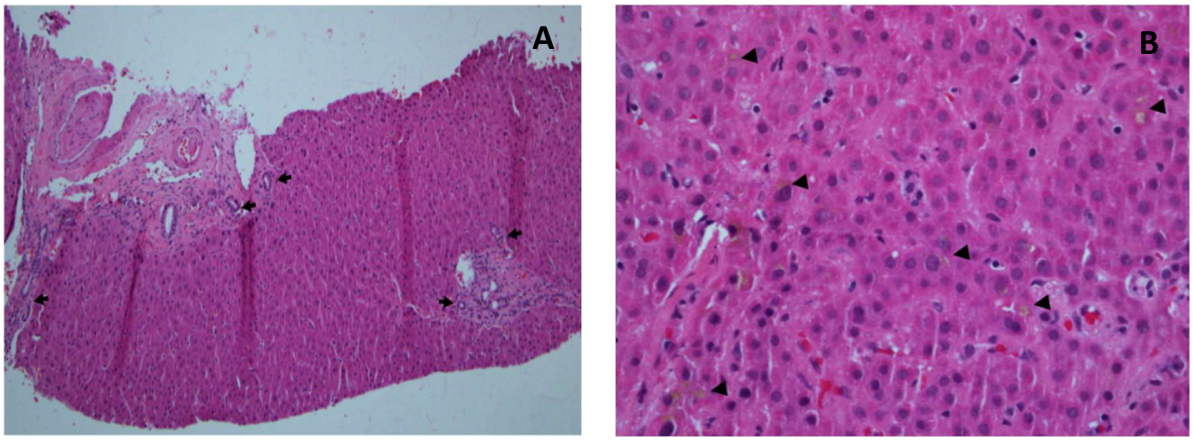

Figure 2: A. H&E, 100x. There is mild periportal lymphocytes infiltrates with occasional plasma cells with ductular reaction (arrows). No bile ducts destruction noted or bile ductular cholestasis seen. Mild portal fibrosis is also seen. **B.** H&E, 400x. In areas, the hepatocytes show bile pigments (arrowheads) with scattered lobular inflammation noted. No steatosis or evidence of malignancy.

DISCUSSION

A high index of suspicion is needed by attending medical practitioners to investigate for PBC in patients with persistently elevated ALP levels, particularly in young females. Previous reports from Malaysia showed the median age of PBC diagnosis was 45.9 years (4). The median age of PBC was not significantly different between asymptomatic and symptomatic patients (5). However, asymptomatic PBC is not uncommon as almost half of the patients were in fact asymptomatic at the time of diagnosis (6). Previous studies report that 18/20 asymptomatic PBC cases were females (7). Thirty-six to 89% of asymptomatic patients may become symptomatic within two to four years after the initial diagnosis (6,8). The two major symptoms that were commonly encountered in early symptomatic phase were pruritis and fatigue (8).

Fortunately, the laboratory investigations are usually helpful to establish the diagnosis, particularly in those with asymptomatic disease. It was suggested that the diagnosis should be considered espceially in middle-aged females with persistently elevated ALP levels that support the evidence of cholestasis (8). Increased serum IgM and positive anti-mitochondrial antibody levels that were noted in our patient were also among the most common laboratory findings in PBC, even during the asymptomatic phase (7). When the diagnosis cannot be confidently established, a liver biopsy may be conducted. Small- and medium-sized intrahepatic biliary duct destruction, as noted in this patient, accompanied by intense granulomatous chronic inflammation of the portal tracts are the key liver histopathological features (8).

Asymptomatic PBC may not necessarily be associated with a better prognosis than symptomatic PBC, which is why the diagnosis should not be missed (5). The medication of choice for PBC is ursodeoxycholic acid, as prescribed to this patient. This drug helps to improve the biochemical profile and delays the histological progression to cirrhosis (8).

CONCLUSION

A proactive approach and a high index of suspicion are vital to diagnose asymptomatic PBC as the patient may present with only biochemical features suggestive of chronic cholestasis. Early diagnosis is crucial because medical therapy which can significantly improve the disease outcome is available.

Conflict of interest
No conflict of interest was declared by the authors.

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