Primary biliary cholangitis or primary biliary cirrhosis (PBC) is a chronic, slowly progressive, autoimmune, cholestatic liver disease. It is globally considered a rare disease. Herein, we presented a 55-year-old Thai woman who gradually developed fatigue and generalized pruritus without fever for four months. Her physical examination revealed only pallor and jaundice, no liver stigmata, and no hepatosplenomegaly; her blood tests showed: Hb 8.1 g/dL, WBC 12,180/mm³, platelet 143,000/mm³, albumin 2.2 g/dL, globulin 4.0 g/dL, AST 164 U/L, ALT 102 U/L, alkaline phosphatase 384 U/L, total bilirubin 2.8 mg/dL, direct bilirubin 1.3 mg/dL, HBV, HCV and HIV-negative, ferritin 39.9 ng/ml, copper 125 ug/dL, ceruloplasmin 0.27 g/L, urine copper < 1 ug/g creatinine, anti-smooth muscle antibody-negative, anti-mitochondrial antibody-positive 1:1,600, ANA-positive, homogeneous pattern 1:80, centromere pattern 1:1,280, anti-cytoplasmic antibody-positive 1:1,280, alpha fetoprotein 3.16 ng/ml, creatinine 0.55 mg% and normal coagulogram. The ultrasonography and the computerized tomography of the upper abdomen showed nodularity and heterogeneous parenchymal disease of the liver, no intrahepatic bile duct dilatation, and slight splenomegaly, compatible with cirrhosis. The esophagogastroduodenoscopy showed acute esophageal variceal bleeding that was successfully treated with the rubber band ligation. The diagnosis of PBC was concluded and she was treated with ursodeoxycholic acid and propranolol. Within 6 months, her clinical symptoms as well as transaminitis partially improved.

Keywords: Primary biliary cholangitis, anti-mitochondrial antibody.
and no Kaiser-Fischer’s ring examined by the ophthalmologist, no xanthoma/xanthelasma.

The blood tests included: Hb 8.1 g/dL, Hct 23.0 %, WBC 12,180/mm³, N 53 %, L 45 %, platelet 143,000/mm³, MCV 79.3 fl, MCH 27.9 pg, MCHC 35.2 g/dL, RDW 16.6 %, direct anti-globulin test-negative, ferritin 39.9 ng/ml, serum iron 37.7 mcg/dL, TIBC 385 mcg/dL, Transferrin saturation 9.8 %, Hb analysis: AE, and Hb E 24.3 %, and Hb A2 3.3 %.

Serum albumin 2.2 g/dL, globulin 4.0 g/dL, AST 164 U/L, ALT 102 U/L, alkaline phosphatase 384 U/L, total bilirubin 2.8 mg/dL, direct bilirubin 1.3 mg/dL, ceruloplasmin 0.27 g/L (normal 0.2 - 0.6), serum copper 125 µg/dL (normal 70 - 160), urine copper < 1 mcg/g creatinine (normal < 50), anti-smooth muscle antibody (ASMA)- negative, anti-mitochondrial antibody (AMA) - positive 1:1,600, alpha fetoprotein 3.16 ng/ml (normal 1.09 - 8.04); HBV, HCV HIV –negative; antinuclear antibody (ANA) - positive, homogeneous pattern 1:80, centromere pattern 1:1,280, anti-cytoplasmic antibody-positive 1:1,280, coagulation tests-normal.

Serum cortisol 16.6 µg/dL, Ca 7.9 mg/dL, P 2.3 mg/dL (normal 2.5 - 4.5), Mg 1.5 mg/dL (normal 1.9 - 2.5), creatinine 0.55 mg/dL, fasting blood sugar (FBS) 94 mg/dL, cholesterol 186 mg/dL, normal thyroid function tests, urinalysis -unremarkable.

The ultrasonography of the upper abdomen showed normal size liver with the inhomogeneous echogenicity and nodularity, no dilatation of intrahepatic bile duct. Also splenomegaly and mild ascites were detected. Impression: Diffuse parenchymatous disease of the liver, infiltrative tumor could not be excluded.

The multi-detector computerized tomography: small sized liver with nodularity and heterogeneous parenchymal density, compatible with cirrhosis; after dynamic contrast study, no enhancing nodule on arterial or venous phases, mild splenomegaly and minimal ascites. Gall bladder wall had edema due to ascites. Impression: Cirrhosis with no evidence of hepatocellular carcinoma as Figure 1.

On the 1st day of admission, she suddenly developed gross hematemesis with subsequent hypotension. The esophagogastroduodenoscopy performed after blood transfusion found acute variceal bleeding that was successfully treated with the varices ligation band.

She was diagnosed as having PBC with acute variceal bleeding. Other diagnosis was hemoglobin E heterozygosity. Besides variceal ligation, she was continuously treated with ursodeoxycholic acid (UDCA) (150 mg/tablet) 3 tablets a day and propranolol 20 mg a day. Six months later, her pruritic symptom and fatigue were much improved and her blood tests were: albumin 2.0 g/dL, globulin 2.2 g/dL, AST 78 U/L, ALT 49 U/L, alkaline phosphatase 128 U/L, total bilirubin 2.9 mg/dL, direct bilirubin 1.2 mg/dL, Hb 9.0 g/dL, WBC 8,890/mm³, platelet 140,000/mm³.

Figure 1. Computerized tomography shows small sized liver with nodularity and heterogeneous parenchymal density, compatible with cirrhosis.
Discussion
The diagnosis of PBC could be made in our case because of the combination of the increased alkaline
phosphatase, high titer of anti-mitochondrial antibody (AMA) in the patient who had no extrahepatic bile
duct obstruction on the imaging and no other common
causes of cirrhosis(8) such as HBV, HCV, alcohol, iron
or copper overload(9) although the liver biopsy was
not performed and autoimmune diseases outside
the liver such as Hashimoto thyroiditis, Sjogren’s
syndrome, the high serum globulin (10), high serum
cholesterol and xanthoma(11) that could be found in
61.2 % of PBC(12) were not observed.
AMA is presumably the hallmark of PBC because
it is found in around 90% - 95 % of patients with
PBC (13) although only 61 from a hundred patients
with positive AMA test suffered from liver diseases;
36 with PBC, 19 with different liver diseases of other
than autoimmune origin, and 4 with autoimmune
hepatitis. (14) However, PBC patients with positive
AMA mostly present the clinical, laboratory, liver
pathology features and response to treatment similarly
to those with negative AMA. (15)
Anti-centromere antibody (ACA) is specific for
the subset of systemic sclerosis, the so-called CREST
syndrome (calcinosis, Raynaud’s phenomenon,
esophageal dysmotility, sclerodactyly, and
telangiectasia) with 25 % frequency. (16) However, it
is also found in 30 % of PBC patients, 80 % of PBC/
 systemic sclerosis and 90 % of limited cutaneous
systemic sclerosis. (17) As for our case, she was initially
screened for the causes of chronic hepatitis with viral
study, ANA, serum copper and ferritin. When the ACA
was found positive with high titer, it prompted us to
explore autoimmune diseases of hepatobiliary system
and finally PBC was established.
The medical treatment of PBC is UDCA that can
decrease the turning rate to the cirrhosis, relieve
symptoms and improve the biochemical response,
alkaline phosphatase < 2 times of upper normal limit
or decrease to < 40 %, or AST < 2 times of upper
normal limit, that would be expected in 6 months or
1 year. (1) If not, obeticholic acid or fibrate should be
added. (18) Our case seemed responsive to UDCA
within 6 months, so no other drug was added.
Conclusion
The primary biliary cholangitis was diagnosed in
a Thai woman who had positive ANA, centromere
pattern with high titer during having long termed
hepatitis without other common causes. Besides the
CREST syndrome, anti-centromere antibody should
be used to remind a clinician to look for the PBC in
case of persistent transaminitis with high level of
alkaline phosphatase.

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