

Images in This Issue
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Six-Year-Old Girl with Porcelain Gallbladder

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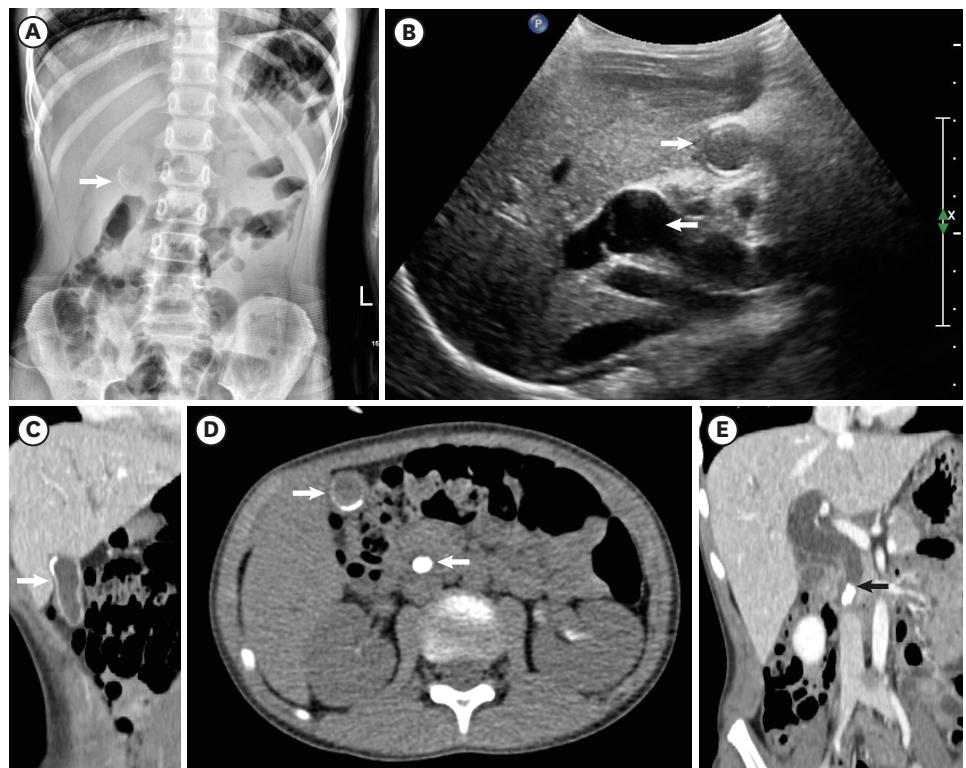


Fig. 1. Initial simple X-ray, sonography, and abdominal CT images. (A) Erect view of posterior to anterior abdominal radiograph shows the circular, thin opacity like cyst in the right upper quadrant. (B) Liver ultrasonography shows increased homogeneous echogenicity along the intramural layer of gallbladder body (rightward arrow) and dilatation of biliary duct (leftward arrow). (C) Coronal view of CT scan shows mucosal high attenuation which is diffuse and homogeneous thin wall along the gallbladder fundus and body. (D) Calcified gallbladder wall (rightward arrow) and calcified radiopaque stone (leftward arrow) were revealed on transverse view of pre-enhanced CT scan. (E) Another coronal view of abdominal CT scan shows the stone (arrow) which is a cause of common biliary ductal dilatation. CT = computed tomography.

A 6-year-old girl presented with 2 month-history of abdominal pain March in 2019. Clinical examination showed abdominal tenderness on epigastric area. Her total bilirubin was 2.8 mg/dL (reference range, 0.2–1.0 mg/dL), direct bilirubin 1.49 mg/dL (reference range, around 0.4 mg/dL), alkaline phosphatase 314 IU/L (reference range, 45–200 mg/dL), aspartate aminotransferase 164 IU/L (reference range, 12–33 IU/L), and alanine transaminase was

425 (reference range, 5–35 IU/L). Other laboratory tests including complete blood count with erythrocyte sedimentation rate, amylase, lipase, and C-reactive protein were normal. Initial simple X-ray showed ovoid shaped radiopaque lesion in the right upper quadrant which is relatively homogeneous thickening and the location of gallbladder fundus (**Fig. 1A**). Ultrasound examination revealed increased homogeneous echogenicity along the intramural layer (**Fig. 1B**, rightward arrow) with dilatation of common bile duct (**Fig. 1B**, leftward arrow). In the abdominal computed tomography, porcelain gallbladder (**Fig. 1C and D**), dilated common bile duct with stone (**Fig. 1D and E**) were confirmed. She was diagnosed with porcelain gallbladder and biliary ductal dilatation caused by common bile duct stone. This girl was referred for surgical removal of gallbladder and stone.

Porcelain gallbladder in children is extremely rare. Only three case reports have been described previously. Fourteen-year-old boy in 1981, 10-year-old girl in 1990, and 13-year-old boy in 2006 were reported.¹⁻³ This girl is the fourth report world widely and the youngest case. Cholelithiasis with biliary ductal dilatation in children is also very rare. The prevalence of cholelithiasis is 0.13%–0.3%.⁴ Although the etiology of porcelain gallbladder is poorly known, the error of calcium metabolism can be caused to chronic cholecystitis, transmural calcification of gallbladder, and cholelithiasis.⁵ Porcelain gallbladder has been known as which is associated with gallbladder cancer. However, it is unclear that porcelain gallbladder is pre-cancerous lesion. Hence Khan et al.⁵ suggested prophylactic cholecystectomy in porcelain gallbladder alone is not recommended. Although it is controversy, she was performed prophylactic cholecystectomy and stone removal because she was very young and had a common bile duct stone with complication.

ETHICS STATEMENT

The Institutional Review Board (IRB) of Chonbuk National University Hospital stated that it was not necessary to achieve IRB approval for this case report, but that patient consent was required as the study dealt only with retrospective use of the patient's medical records and related images. Written informed consent was obtained from the patient's parents prior to the publication of this case report and accompanying images.

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