

Pearl-White Gallstones Causing Choledocholithiasis

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CASE REPORT

A 71-year-old woman who had previously undergone cholecystectomy several years prior presented with nausea, vomiting, and right upper quadrant abdominal pain. Computed tomography of her abdomen revealed a dilated common bile duct measuring 11 mm in diameter. She underwent endoscopic retrograde cholangiopancreatography (ERCP) for evaluation. A sphincterotomy with balloon extraction revealed several white stones as the cause of her choledocholithiasis (Figure 1). Her symptoms resolved, and she fully recovered to her previous state of health.

Gallstones have traditionally been divided into 3 main categories based on cholesterol content: cholesterol stones (cholesterol content >70%), mixed stones (cholesterol content 30–70%), and pigment stones (i.e., black or brown stones, cholesterol content <30%).^{1–3} Cholesterol stones consist of cholesterol monohydrate and can also include a mixture of calcium salts, bile acids, pigments, and glycoprotein (with the major components being cholesterol and protein constituents).^{2,4} Mixed stones are composed of varying amounts of cholesterol and the above components. Cholesterol stones usually range in color from pale yellow to yellow-green or brownish yellow, and they are round or oval with smooth surfaces.² The stones in our case were presumed to be cholesterol stones given their light color and characteristic shape and appearance; however, their composition was never analyzed in the laboratory. Our literature review of studied gallstones did not reveal any combination of chemical components known to cause a pearl-white color as seen in our case. Thus, we report this case as a rare finding on ERCP.



Figure 1. (A) A large stone adjacent to the ampulla after balloon extraction at ERCP. (B) Three pearl-white stones in the duodenum. (C) Triangular pearl-white stone on gauze after ERCP.

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DISCLOSURES

Author contributions: P. Stoner performed the literature review and wrote the manuscript. A. Schlachterman provided the images, performed the literature review, and edited the manuscript. E. Hilgenfeldt edited the manuscript. P. Draganov edited the manuscript and is the article guarantor.

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