(*Refer to page 325*)

Answer: Spontaneous biliary stone passage

Spontaneous stone passage from the biliary tract is a frequent event in clinical practice. However, the capture of the actual event occurring is rare and not widely reported in the literature. [1, 2] In patients who have evidence of common bile duct (CBD) stones, it has been reported that up to 73% of patients may have passed their stones spontaneously when investigated. [1]

The presence of gallbladder contraction might play a role in spontaneous stone passage. When the gallbladder contracts, it leads to an increase in the intra-biliary ductal pressure and expulsion of the bile duct stone. [3] However, in such cases, the stones are typically small. Other mechanisms reported include metabolic dissolution in the gallbladder which may lead to disappearance of stones in the gallbladder, the presence of biliary fistula that allows passage of stones, or spontaneous passage of stones through natural or normal ductal system and digestive tract i.e. in the absence of fistula. [4]

Patients can be asymptomatic as small stones can pass through unnoticed or minimal non specific symptoms. This can be mistaken as dyspepsia. In symptomatic gallstone patients, common presentations include right upper quadrant colicky pain as a result of the migration of the calculi along the biliary tract, transient pancreatitis, cholangitis, jaundice or combination of these. The spontaneous passage of stone usually leads to complete resolution of patient's clinical symptoms. [1, 2]

The size of stones in important in spontaneous stone passage. Smaller stones (less than 5 mm) are more likely to pass spontaneously. Patients with gallstones pancreatitis tend to have spontaneous stone passage as the stones are typically small enough to pass down to the junction of the common bile duct and pancreatic duct to cause pancreatic duct obstruction. [1] Therefore, it is not uncommon that no stone is seen at the time of endoscopy. It has been reported that the negative predictive value of spontaneous migration is 95% in patients who have stone diameter greater or equal to 8mm. [3] Hence, the larger the size of stone retained, the lower the rate of spontaneous stone passage.

NOTE: *For magnified image of Panel, please go to Supplementary Text.*

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