Clinical picture

**An unusual presentation of gallstone disease**

A 61-year-old woman presented with a 5-week history of intermittent colicky abdominal pain, diarrhea and stool discoloration. Physical examination showed abdominal obesity and right upper quadrant tenderness without guarding or rebound. Laboratory analysis was unremarkable, except for the presence of hypercholesterolemia. Two months after the initiation of her symptoms, the patient noticed the appearance of multiple yellow–white to brown, cylindrical stones in her stool. Up to 20 calculi with a diameter of 5–10 mm were recovered from the stool on several occasions (Figure 1). The evacuation of the stones was accompanied by a complete resolution of the patient’s clinical symptoms. The exact nature of the stone fragments was determined by Fourier Transform Infrared (FTIR) spectroscopic analysis, revealing a 100% cholesterol content consistent with the diagnosis of pure cholesterol gallstones. In the present case, the occurrence of gallstones in the stool may likely be explained by a spontaneous expulsion of biliary concretions into the intestine.

Gallstones can be retrieved from the stool after passage from the gallbladder or biliary tract into the bowel through a biliary-enteric fistula. Since abdominal ultrasound and computed tomography showed no evidence of a fistulous communication in our patient, it can be assumed that these gallstone fragments were cleared from the gallbladder through the natural route of the biliary tree and digestive tract.¹,²

This spontaneous passage of gallstones ‘per via naturalis’ has only been sporadically documented in the literature, suggesting that it is a relatively uncommon event. However, small stones may pass without any noticeable symptoms which may lead to under-recognition of this phenomenon.² In some cases, the migration of calculi along the biliary tract can provoke abdominal pain. Different pain patterns have been described, ranging from vague abdominal discomfort to typical right upper quadrant colicky pain. The pain may be accompanied by other symptoms characteristic of gallstone disease including jaundice and acholic stools.¹,²

**Figure 1.** Biliary concretions recovered from the stool following their spontaneous passage from the gallbladder into the bowel. The gallstone in the middle of the picture is disintegrated into coarse crystalline fragments. Dimensions are depicted using square millimeter paper (10 × 10 mm).

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The above described phenomenon should not be confused with alleged ‘stones’ that can be retrieved from the stool following a ‘gallbladder cleansing’ regimen. This popular, not scientifically legitimated method for expelling gallstones generally involves a 1-day diet consisting of apples, olive oil and lemon juice. The gallstone-like deposits that appear in the stool the next day differ from genuine gallstones in their semisolid consistency and fatty acid composition. True gallstones have a crystalline structure and contain calcium carbonate, bilirubin or cholesterol, as was the case in our patient.3

Key learning points:
- Gallstones may pass uneventfully from the gallbladder into the small intestine through the normal anatomic structures, with subsequent recovery from the stool.
- This unusual presentation of gallstone disease must be included in the differential diagnosis of vague abdominal complaints.
- Analysis of the retrieved stone fragments, e.g. by means of FTIR spectroscopy, is helpful in establishing the final diagnosis.

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Conflict of interest: None declared.

References