

Clinical presentation

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Gallstones are being increasingly detected incidentally during imaging for other symptoms. Prophylactic cholecystectomy is not usually indicated since the risk of developing serious complications is low. Longitudinal follow-up study of individuals with silent gallstones has shown that over 20 years only 18% developed biliary pain; the mean yearly probability was 2% during the first 5 years, 1% during the second 5 years and 0.5% during the third 5 years. If symptoms occur, patients typically complain of right upper quadrant or epigastric pain, which may radiate to the back. This may be described as colicky but the typical biliary 'colic' more often is dull, continuous and severe, lasting for several minutes or even hours, with associated nausea and vomiting (Chapter 63). Frequently, pain starts during the night and wakes the patient; minor episodes may occur intermittently during the day. In the majority of cases the process is limited by the stone slipping back into the body of the gallbladder. The development of acute cholecystitis is marked by fever. Associated symptoms that have a questionable relation to gallstones include dyspepsia, flatulence, food intolerance, particularly to fats, and some alteration in bowel frequency. As pain resolves (spontaneously or with medications) the patient improves and is able to eat and drink again, often only to suffer further episodes. A patient may have several such episodes over a few weeks and then no symptoms for some months. This may culminate in a contracted non-functioning gallbladder with the

Impaired gallbladder function • Supersaturated bile • Emptying • Age • Absorption • Sex • Excitation • Genetics • Obesity • Diet • Absorption/enterohepatic circulation of bile acids • Cholesterol • Deoxycholate nucleating factors • Bowel transit time • Mucus • Faecal enteric flora • Glycoprotein • Ileal resection • Infection • Cholestyramine

Figure 71.25 Factors associated with gallstone formation.

sis is given in Summary box 71.3. In acute cholecystitis the right upper quadrant tenderness is exacerbated during inspiration by palpation in the right subcostal region (Murphy's sign). A mass may become palpable as the omentum walls off an inflamed gallbladder. If resolution does not occur, empyema of the gallbladder may result. The wall may become necrotic and perforate, with the development of localised peritonitis (Table 71.1). Occasionally, complete obstruction of the cystic duct leads to reabsorption of bile salts by the gallbladder epithelium and secretion of uninfected mucus, resulting in a mucocele of the gallbladder. Jaundice may ensue if the gallstone migrates from the gallbladder and obstructs or compresses the CBD (Mirizzi). Rarely, a large solitary gallstone may erode the gallbladder wall, causing a cholecystoduodenal fistula and subsequent bowel obstruction, known as gallstone ileus. A palpable, non-tender gallbladder in the presence of jaundice may portend a more sinister diagnosis as a palpable gallbladder in the presence of jaundice is unlikely to be due to gallstones (Courvoisier) and usually results from a distal common duct obstruction secondary to periampullary malignancy. Summary box 71.2 Effects and complications of gallstones

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Biliary colic Biliary obstruction (jaundice) Acute cholecystitis Acute cholangitis Chronic cholecystitis Acute pancreatitis Empyema of the gallbladder Intestinal obstruction (gallstone ileus) Mucocele of the gallbladder Perforation of the gallbladder Common Uncommon Appendicitis Acute pyelonephritis Perforated peptic ulcer Myocardial infarction Acute pancreatitis Pneumonia - right lower lobe

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