

DEFINITIONS

1. **Cholelithiasis** is the term applied to stone formation in the gall bladder or biliary passages.
2. **Cholecystitis** is the term applied to inflammation of the gall bladder, with or without infection.

CLINICAL MANIFESTATIONS

3. **Gallstones** are often symptomless and are a frequent incidental finding at autopsy examination. In follow-up studies of patients with symptomless gallstones, about 15% develop symptoms.
4. Gallstones may cause symptoms by impaction, obstruction or by leading to the development of cholecystitis. **Biliary colic** is a severe, spasmodic, upper abdominal pain which may occur when a stone is impacted. Obstruction of the common bile duct may cause jaundice and may also lead to cholangitis, an ascending infection of the bile ducts within the liver. Obstruction of the bile duct at the point where it enters the small intestine may cause pancreatitis due to regurgitation of bile into the pancreatic duct.
5. The symptoms of **acute cholecystitis** include abdominal pain, nausea, vomiting and fever, all of which vary in severity.
6. **Chronic cholecystitis** usually causes ill-defined symptoms including nausea, distension of the abdomen and epigastric discomfort. A history may be given of previous attacks of jaundice or acute cholecystitis.

AETIOLOGY

7. Gallstones are formed from the constituents of the bile – cholesterol, bile pigments and calcium salts – in various proportions. Cholesterol is normally held in solution in the bile by the detergent action of bile salts. Formation of stones may be related to increased secretion of cholesterol or to reduction in bile salts. Hepatic bile from patients with biliary stones differs from normal bile in its constituents and it is believed that a primary abnormality of bile salt metabolism at least plays a part in gallstone formation.
8. The highest-known prevalence of gallstones is among American Indians. Gallstones are very common in Western populations but rare among Africans. The incidence in Africa is, however, rising as Western-style diets and improved standards of living spread. There is a steady increase in gallstone prevalence with increasing age, most patients presenting after the age of 50 years. Gallstones are twice as common in women as in men and obese women are more often affected than the non-obese. An increased incidence is associated with the long-term use of oral contraceptives.

9. An increased risk of developing cholelithiasis is associated with cirrhosis of the liver, diabetes mellitus, resection of the ileum and with long-term treatment with cholestyramine, clofibrate or cholesterol-lowering diets. Several studies have indicated that the surgical operation of truncal vagotomy may result in a higher incidence of cholelithiasis. Pigment stones are often found where there has been increased haemolysis.
10. Nearly every case of acute cholecystitis is caused by gallstones obstructing the cystic duct. The imprisoned bile salts exert a toxic effect on the gallbladder wall which may lead to secondary infection of the gallbladder by intestinal bacteria.
11. Chronic cholecystitis is also nearly always associated with the presence of gallstones. It may follow attacks of acute cholecystitis but most often it develops insidiously.
12. Non-calculous cholecystitis is rare. It may complicate bacteraemia from elsewhere and has been recorded following extensive injuries and after severe burning. Acute or chronic cholecystitis may occur in typhoid fever. Acute non-calculous cholecystitis may occasionally occur if a common biliary and pancreatic channel exists and becomes obstructed causing pancreatic enzymes to enter the gallbladder.

CONCLUSION

13. **Cholelithiasis**, other than when it occurs in association with those factors mentioned in paragraph 9 above, is an endogenously-determined condition, the frequency of which increases with advancing age.
14. Apart from rare cases of non-calculous cholecystitis, causes of which are listed at paragraph 12 above, both **acute** and **chronic cholecystitis** are the result of irritation and obstruction due to the presence of gallstones.

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