SUMMARY

The liver is the largest gland in the body. One of the many metabolic products of the liver is bile, which is delivered to the duodenum by a duct system that includes a concentrating and storage organ, the gall bladder.

The secretion of bile depends on the active transport of bile salts and sodium transport at the canaliculus with an additional component produced by the bile ducts. Biliary lipid secretion depends mainly on bile salt secretion and the lipids are associated and solubilized in the form of mixed micelles. Hepatic bile is stored and concentrated in the gall bladder. Concentration is primarily by the active absorption of sodium and chloride.

Anomalies of the extrahepatic biliary tree and associated arteries are not just curiosities but major factors in the causation of bile duct injuries during surgery. A working knowledge of the incidence and types of anomaly is vital for safe cholecystectomy as 50 per cent of patients presenting with gall stones show a significant variation from what is generally considered to be the normal anatomical pattern. The preoperative diagnosis of gall bladder and biliary disease has become much more accurate because of both changes in the conventional methods and in the introduction of new methods of radiology.

The two-day oral cholecystogram taken in conjunction with ultrasonography is extremely accurate in diagnosing

gall bladder pathology. When both methods are used the non-visualized gall bladder is almost always diseased.

Thr role of radiology has also been extended into the postoperative situation. Gall stones shown by T-tube cholangiography can be retrieved using a guide-wire with an attached basket and radiological control.

The possibilities in radiodiagnosis in the last decade have thus been greatly increased but so have the number of different methods.

Cholecystectomy for cholelithiasis is one of the most satisfactory operations in abdominal surgery. Burnett and shields (1958) found that 75 per cent of 141 patients undergoing cholecystectomy were completely relieved of all their preoperative symptoms, while le Quesne, Whiteside and Hand (1959) found that 75 per cent of 73 similarly treated patients were either symptom free or had only mild symptoms apparently unrelated to the biliary system. These bald figures underestimate the efficacy of the operation, for of the remaining 25 per cent of patients in both series only a minority had severe symptoms, and there is now abundant evidence that the operation is almost uniformly successful in relieving patients of their symptoms.

As would be expected, the group of patients who continue to have symptoms after cholecystectomy has aroused much interest, and it has been suggested that some of them are suffering from a specific postcholecystectomy syndrome,

in the same way that some patients after partial gastrectomy exhibit one or other of the postgastrectomy syndromes. It is obvious that a patient who has undergone cholecystectomy may at a later date develop symptoms of a totally unrelated condition. The real problem of postcholecystectomy symptoms is presented by the group who, following cholecystectomy, complain of upper abdominal symptoms compatible with extrahepatic biliary disease; in some instances these symptoms are similar to those experienced preoperatively and are noticed within a short while of operation, whereas in others they may differ from the preoperative symptoms and perhaps not be noticed until some months or more after the operation. Such symptoms may be due to extrabiliary eauses or to extrahepatic biliary disorders.

The commonest cause of abdominal symptoms in patients who have undergone cholecystectomy for calculous disease is some extrabiliary disorder, as reflux oesophagitis, peptic ulceration, diverticular disease and relapsing or chronic pancreatitis. A careful history will suggest the diagnosis which is confirmed by investigations.

Stricure of the bile duct is best treated by anastomosis of the common hepatic duct to the jejunum.

The management of residual stone in the common duct falls into two groups; those with a T-tube in the common duct and those without. In the first group, there are three

approaches to the non-operative removal of common duct stones, namely: instrumental removal through the T-tube tract, flushing of the duct with an inert solution, and the use of pharmacological agents directly onto the stones to cause dissolution or fragmentation. In the second group, two methods are available for removal of such stones: first, open operation and secondly, endoscopic manipulation.

In the present state of our knowledge it seems that there is no convincing evidence that leaving behind a portion of normal cystic duct renders the patient liable to postcholecystectomy symptoms. However, if a small portion of diseased gall bladder as well as the cystic duct is left in situ, then the patient may experience further symptoms.