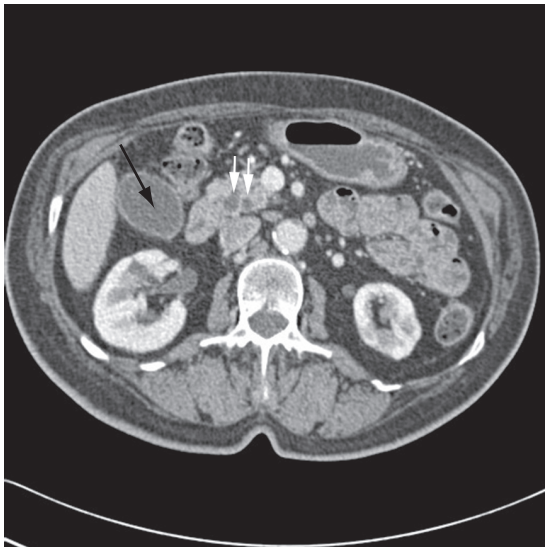


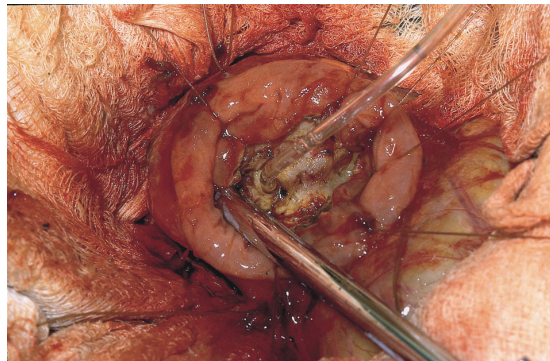
## Case 92 The patient in Case 91 has surgery



**Figure 92.1** CT of the patient described in Case 91. There is a mass involving the second part of the duodenum (two white arrows) and the gall bladder is distended (black arrow).

The patient described previously (Case 91) was intensively investigated. The most important finding, which established the diagnosis, was an upper gastroduodenal fiberoptic endoscopy. This revealed an ulcerating tumour in the second part of the duodenum, from which biopsy specimens were taken. A CT scan showed no evidence of metastases, and also revealed a typical 'double duct' sign where both bile and pancreatic ducts are visibly dilated (Fig. 92.1, arrowed).

After being given vitamin K by injection, he was submitted to laparotomy via an upper midline incision. The liver was smoothly enlarged but free from deposits; the gallbladder was tensely distended (also visible on the CT scan). A small mass could be felt within the second part of the duodenum. This was exposed by opening the second part of the duodenum longitudinally and is shown in Fig.



(a)



(b)

**Figure 92.2** (a) Operative appearance of the tumour in the duodenum. (b) The resected specimen.

92.2a. The tumour was excised with diathermy and the specimen is shown in Fig. 92.2b. The duodenum was sutured and he made a satisfactory recovery. The jaundice faded completely over the subsequent 3 weeks.

### What is this tumour and from which structures may it have originated?

This is a periampullary papilliferous and ulcerating carcinoma. It may have originated in the ampulla of Vater, the lower end of the common bile duct or, rarely, from the duodenal mucosa. The histological report on the

specimen stated that it was a well differentiated adenocarcinoma and that excision was complete.

**Fine catheters have been passed into two structures through the duodenal papilla. What is the upper one and what is the lower?**

The upper catheter is in the orifice of the common bile duct, the lower in the opening of the main pancreatic duct as these come together at the ampulla of Vater (Fig. 92.2a).

**What is the distribution of carcinoma of the pancreas through the head, body and tail of the pancreas?**

Carcinoma of the pancreas occurs most commonly in the head, then in the body and then, least, in the tail. The proportions are approximately 60%, 25% and 15%, respectively.

**What is the age and sex distribution of carcinoma of the pancreas and what is apparently happening to its incidence?**

The disease occurs particularly in middle-aged and

elderly subjects. Although it used to have a male predominance, it is now equally distributed between the sexes. It is commoner in smokers. The incidence of the tumour is increasing in the Western world. This may be because of the increasing longevity of the population and perhaps also because of more sophisticated techniques of diagnosis.

**Why was the patient given vitamin K by intramuscular injection before his operation?**

Vitamin K is essential for the hepatic synthesis of prothrombin. Vitamin K is fat-soluble and bile salts are essential for its absorption from the small gut. In obstructive jaundice, bile salts cannot reach the intestine through the blocked common bile duct, the serum prothrombin level falls and any surgery will be complicated by bleeding due to defective blood clotting.

Note that patients with severe hepatic disease – e.g. hepatitis or extensive tumour destruction – are unable to synthesize prothrombin. This accounts for the serious bleeding problems that are associated with operations on these patients, who require replacement by transfusion of essential components of the clotting cascade.