

## Case 87

# A man with a grossly swollen abdomen



Figure 87.1

Figure 87.1 shows the appearance of a 68-year-old pensioner who used to work in a variety of public houses and bars as a barman. He has abused alcohol – beer and spirits – since his teens. He now presents with slight clinical jaundice – best seen on examining his conjunctivae – gross ascites, as demonstrated by shifting dullness in his flank, and marked pitting oedema of the legs almost to his knees. He has never vomited blood or passed black tarry stools.

### What is the likely diagnosis that would fit this clinical picture?

Cirrhosis of the liver due to alcohol.

### What are the factors responsible for the ascites in this case?

Transudation of fluid into the peritoneal cavity is here due to a combination of factors:

- Splanchnic vasodilatation secondary to the liver failure results in systemic hypotension, renal hypoperfusion and activation of the renin–angiotensin system, resulting in raised serum aldosterone, thus producing sodium and water retention.
- The portal venous pressure is raised due to compression of the portal venous radicles in the liver by the scarred surrounding hepatic tissue.
- The serum albumin, which is synthesized in the liver, is reduced, resulting in lowering of the serum osmotic pressure.

### What do you notice about the patient's umbilicus?

There is a large paraumbilical hernia – a common finding in a grossly distended abdomen from any cause.

### What CNS changes would you look for in this patient, and how are they explained?

Mental changes, manifesting as varying degrees of encephalopathy from lethargy and mild confusion to, in severe cases, hepatic coma, are secondary to a combination of factors. Principal among these are the inability of the diseased liver to detoxify various nitrogenous breakdown products of protein metabolism and the portosystemic shunting that diverts these products directly into the systemic circulation.

### What treatment modalities can be offered to reduce the ascites in this patient?

- A low sodium diet and diuretics (spironolactone, occasionally combined with a loop diuretic).

## Part 2: Cases

- In intractable cases, repeated paracentesis (percutaneous drainage of the ascites) with albumin replacement provides symptomatic improvement.
- The formation of a portosystemic shunt, usually by means of a transjugular intrahepatic portosystemic shunt (TIPS), may be considered.
- Diuretic-resistant ascites is an indication for consideration of liver transplantation if the patient is otherwise suitable.