Multiple-choice questions

Multiple-choice questions in gastro-enterology and hepatology

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Are the statements listed beneath each question true or false? Answers are given overleaf.

QUESTION 1

Which of the following is true of normal intestinal physiology?:

- A 9 litres of fluid enters the gut each day, most of which comes from the diet
- B Most water absorption occurs in the colon
- C In excess of 90% of bile salts are absorbed in the jejunum
- D Sodium and glucose absorption are linked
- E Fluid absorption is the predominant function of the jejunum

QUESTION 2

In a patient with suspected bacterial overgrowth of the small bowel, which is the best of the following investigations:

- A C¹³-urea breath test
- B Pancreolauryl test
- C Serum trypsinogen
- D Urinary indican
- E C¹⁴-glycocholic acid breath test (GCA)

QUESTION 3

In a patient with severe symptoms of gastro-oesophageal reflux which of the following is true?:

- A Endoscopy will show severe oesophagitis
- B Cigarette smoking will exacerbate the problem
- C Cisapride is effective at relieving symptoms
- D Ambulatory pH monitoring will show long periods with pH less than 4
- E Dysphagia may occur

QUESTION 4

A patient presents with a history of diarrhoea of several weeks' duration. Which of the following may be the cause?:

- A *Entamoeba histolytica*
- B *Yersinia enterocolitica*
- C Enterotoxigenic *Escherichia coli*
- D *Clostridium difficile*
- E *Giardia lamblia*

QUESTION 5

A 54-year-old man has recurrent attacks of severe upper abdominal pain. His abdominal ultrasound shows multiple small stones in the gall bladder, an enlarged spleen and no other abnormality. His bilirubin is 60 µmol/l (normal < 18) and his lactate dehydrogenase 1600 IU/l (< 525). γ-Glutamyl transferase and alkaline phosphatase are normal. There is a family history of splenectomy in an uncle. Which of the following measures are appropriate?:

- A Endoscopic retrograde cholangiopancreatography
- B Full blood count and film
- C Liver biopsy
- D Cholecystectomy
- E Splenectomy

QUESTION 6

In haemochromatosis which of the following are true?:

- A Inheritance is by a dominant gene on chromosome 6
- B Measurement of hepatic iron content is the most reliable test
- C Serum transferrin is more than 90% saturated
- D Desferrioxamine is used in treatment of haemochromatosis
- E Early treatment reduces the risk of hepatoma

QUESTION 7

Predictors of better survival after upper gastrointestinal haemorrhage are:

- A Older age
- B Admission to a specialised gastrointestinal bleeding unit
- C Initial admission for other reasons
- D Frequent use of surgery
- E Immediate endoscopy

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Answers**QUESTION 1**

- A False
- B False
- C False
- D True
- E False

The diet normally contributes 2 l, and salivary, gastric biliary, pancreatic and intestinal secretion 7 l of the fluid handled by the gut each day. Most fluid is absorbed in the small intestine and only about 1 litre passes into the colon, which absorbs 80% of this. The jejunum is involved in both secretion and absorption of fluid, only absorption normally takes place in the ileum. One of the three main mechanisms for sodium absorption is carrier-linked absorption with glucose or amino acids. Bile salts are specifically absorbed only in the final 100 cm of the terminal ileum.

QUESTION 2

- A False
- B False
- C False
- D False
- E True

In the C¹⁴-GCA breath test, radiolabelled glycocholic acid is deconjugated by bacteria in the bowel, and the C¹⁴ metabolised and excreted as labelled CO₂ which is measured in the breath. The other tests each have different specific uses.

QUESTION 3

- A False
- B True
- C False
- D True
- E True

The correlation between symptoms of reflux and endoscopic findings is poor. Cigarette smoking reduces lower oesophageal sphincter pressure and will worsen the problem.

Although cisapride, H₂ receptor antagonists and proton pump inhibitors have all been shown to improve symptoms in double-blind controlled trials, only proton pump inhibitors are reliably effective in patients with severe symptoms. Dysphagia may occur in the absence of malignancy or benign stricture, presumably on the basis of oesophageal dysmotility in a sensitive oesophagus. This will settle with medical treatment, but dysphagia is **always** an indication for investigation.

QUESTION 4

- A True
- B True
- C False
- D True
- E True

Diarrhoea due to enterotoxigenic *E coli* is usually brief although the associated illness may be severe and even fatal because of complications such as haemolytic uraemic syndrome and ischaemic colitis.

QUESTION 5

- A False
- B True
- C False
- D True
- E True

The pain is due to gallbladder colic, but the blood tests indicate haemolysis and not biliary obstruction. The family history points to an inherited condition. The most probable diagnosis is congenital spherocytosis which will be confirmed by full blood count and film and further investigation of red cell fragility. Cholecystectomy is indicated for his gallstones and splenectomy for the management of his spherocytosis.

QUESTION 6

- A False
- B True
- C True
- D False
- E True

Haemochromatosis is inherited by an autosomal recessive gene, closely associated with HLA genes on chromosome 6. Measurement of hepatic iron content and calculation of the hepatic iron index most reliably separates haemochromatosis from other causes of hepatic iron overload. Genetic testing for the abnormal gene is becoming available further to refine diagnosis and management. Treatment is by weekly venesection (250 mg of iron removed/pint) until iron stores are reduced to normal. This usually takes up to two years. Desferrioxamine is not useful because it does not mobilise enough iron. If treatment is started before liver disease develops life expectancy is normal.

QUESTION 7

- A False
- B True
- C False
- D False
- E False

For larger hospitals, organisation of a specialised multidisciplinary unit does seem to lead to better outcomes. However, this may not be true in smaller units. Prime predictors of death are advanced age and admission for other serious diseases. Endoscopy within 24 hours is desirable, but it has not been proved that immediate endoscopy improves outcome. Close monitoring on general wards and vigorous medical treatment of problems will produce good results. Excessively frequent surgical intervention worsens outcomes.