

Self-assessment questions: The hepato-enteric immune axis in health and disease

Palak J Trivedi and David H Adams

- 1 The liver is able to generate a vigorous immune response to pathogenic organisms entering through the portal circulation while simultaneously being tolerogenic to harmless food-borne antigens. Which of the following statements regarding the hepatic immune response are true?
 - (a) A vigorous intrahepatic immune response depends on activation of T-cells by hepatic-resident antigen-presenting cells
 - (b) A vigorous intrahepatic immune response depends on activation of DCs by liver-resident T-cells
 - (c) Direct activation of T-cells within the liver by hepatic-resident antigen-presenting cells usually results in tolerance
 - (d) Direct activation of DCs within the liver by hepatic-resident T-cells usually results in tolerance
 - (e) IL10 promotes the development of effector T-cells over T_{reg}S

- 2 Primary sclerosing cholangitis (PSC) is strongly associated with inflammatory bowel disease (IBD). Which of the following questions regarding PSC and IBD are correct?
 - (a) The majority of patients with IBD have PSC
 - (b) Patients with PSC and IBD are have a lower lifetime risk of developing colonic carcinoma than patients with IBD alone
 - (c) Colectomy for ulcerative colitis prevents the development of PSC
 - (d) Patients with PSC and IBD have a greater lifetime risk of developing colonic carcinoma than patients with IBD alone
 - (e) Crohn's disease is more common than ulcerative colitis in patients with PSC

- 3 Regarding enterohepatic lymphocyte homing, which of the following statements are false?
 - (a) CCL25 and $\alpha 4\beta 7$ are constitutively expressed on the sinusoidal endothelium in normal human liver
 - (b) CCL25 and MAdCAM-1 are upregulated in the human liver in PSC
 - (c) Mucosal VAP-1 expression is upregulated in ulcerative colitis
 - (d) MAdCAM-1 is constitutively expressed on the lamina propria of the small bowel
 - (e) VAP-1 is constitutively expressed on the human liver sinusoidal endothelium

- 4 Which of the following statements is correct?
 - (a) Enzymatic action of MAdCAM-1 leads to the upregulation of VAP-1 expression
 - (b) Neutralising antibodies against MAdCAM-1 are efficacious in treating PSC
 - (c) MAdCAM-1 possesses amine oxidase activity and also functions as an adhesion molecule
 - (d) Patients who develop PSC after being diagnosed with IBD have a better outcome than those who are diagnosed with PSC before being diagnosed with IBD
 - (e) Colectomy for ulcerative colitis before liver transplant is more protective against PSC recurrence in the liver allograft than colectomy performed 10 years after transplant

Answers to these self-assessment questions can be found on page s92.