

Self-Assessment Quiz

Hepatobiliary Imaging

The Continuing Education Committee presents this self-evaluation quiz on hepatobiliary imaging. Answers can be found on page 231. References are listed at the end of the quiz to assist in your review of this topic. Please select the BEST answer for each of the questions listed below.

- For the evaluation of the gallbladder during hepatobiliary imaging, how long must the patient fast prior to the exam?
 - 1 hr
 - 2 hr
 - 3 hr
 - 9 hr
- Quality(ies) necessary for an ideal hepatobiliary radiopharmaceutical is(are):
 - high hepatocellular extraction efficiency.
 - fast hepatocellular transit time.
 - low renal clearance, which does not increase with decreasing hepatocyte function.
 - all of the above
 - a and c
- When performing hepatobiliary imaging, in order to separate the gallbladder activity from the activity in duodenum, a left anterior oblique view is obtained.
 - True
 - False
- Evaluation of the hepatobiliary system with radiopharmaceuticals was introduced in 1955; the radiopharmaceutical used at this time was:
 - ^{99m}Tc tagged to rose bengal.
 - ^{99m}Tc -diisopropyl-IDA.
 - ^{131}I tagged rose bengal.
 - ^{99m}Tc -sulfur colloid.
- The function of the hepatic parenchymal cell is:
 - to produce bile.
 - to secrete bile.
 - metabolic.
 - all of the above
- The right and left hepatic bile ducts join at the porta hepatis to form the:
 - cystic duct.
 - gall bladder.
 - common hepatic duct.
 - none of the above
- Technetium-99m-HIDA concentrates in:
 - hepatocytes.
 - lymphocytes.
 - erythrocytes.
 - all of the above
- Bile produced in the liver is concentrated and stored in the:
 - duodenum.
 - gallbladder.
 - spleen.
 - pancreas.
- Hepatobiliary imaging is used in suspected acute cholecystitis to evaluate patency of the cystic duct.
 - True
 - False
- Better accuracy in distinguishing nonobstructive versus obstructive jaundice is seen in ^{99m}Tc -IDA imaging over computed tomography and ultrasound scanning.
 - True
 - False
- Indications for hepatobiliary imaging in children include:
 - differentiation between biliary atresia and hepatitis.
 - evaluation of right upper quadrant masses.
 - evaluation of right upper quadrant pain.
 - all of the above
- A congenital dilatation of the extrahepatic biliary tree is called:
 - cholangitis.
 - choledochal cyst.
 - choledochojejunostomy.
 - cholestasis.
- Factors which prolong the appearance of the gallbladder during hepatobiliary imaging are:
 - impairment of the hepatocyte function.
 - obstruction of the cystic duct.
 - contraction of the gallbladder due to recent food ingestion.
 - obstruction of the biliary ducts proximal to the cystic duct.
 - all of the above
- In normal patients, the hepatic extraction fraction by deconvolution is _____ for imaging agents ^{99m}Tc -DISIDA and Mebrofenin.
 - 25%.
 - 50%.
 - 75%.
 - 100%.
- The normal ejection fraction in quantification hepatobiliary imaging studies of the gallbladder using cholecystokinin (CCK) is equal to or greater than:
 - 5%.
 - 15%.
 - 25%.
 - 35%.

References

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- Klingensmith W, Kuni C. *Atlas of Radionuclide Hepatobiliary Imaging*. Boston: G.K. Hall Medical Publishers; 1983:1–121.
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