GIT-biochemistry

Archive

Lecture 3

Drug metabolism and
Cytochromes P450
& Bile

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1.One of the following is incorrect regarding the formation of bile acid from cholesterol :

A- Double bond is removed.

B- Monooxygenases introduce one or two additional OH group into steroid ring.

C- B and C rings are altered from trans to cis.

D- Terminal C atom is oxidised to a carboxylate group COO-

E- Side chain is shortened by three C atoms.

Answer: C

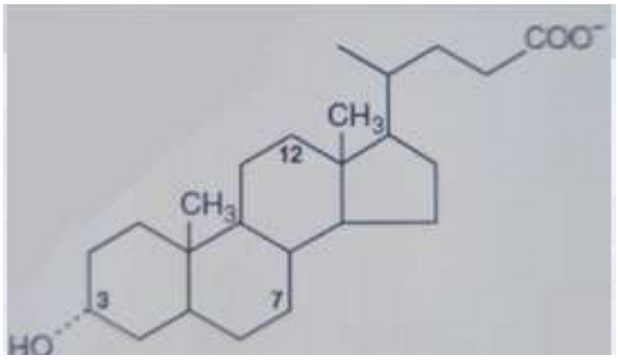
2.Name of the structure:

a.Lithocholic acid

b.heme

c.cholesterol

d.choline acid



Answer:a

3.The secondary bile salt that is excreted by feces:

Lithocolic acid

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4.CYP450 Oxidation mechanism choose the wrong statement?

A. NADPH donates its electrons to FADH2

B. When the iron in the Fe+2 state it can bind oxygen

C. The first electron donated to CYP450 convert ferrous to the ferric state

D. The aim of CYP450 oxidation is introducing OH group to hydrophobic
substrate

E. The second electron donated to CYP450 passes to oxygen

ANSWER: C

5.Emulsification of fat, choose the wrong statement?

A. The charged hydrophilic side of bile salt will be projecting from the surface of micelles

B. Micelles are soluble in water

C. The hydrophobic side of the bile salts mix with fat droplet

D. Gastric lipase digest the fat in micelle producing fatty acids and 2-monoacylglycerols

E. This process mixes two different substances that normally do not mixtogether

ANSWER: D

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****answer of question5 from slides

The hydrophobic side of the bile salts mix with fat droplet and the charged hydrophilic side will be projecting from the surface of micelles thus making the micelles soluble in water and ensure that large fat drops cannot reform because like charges repel each other. Pancareatic lipase digest the fat in micelles then the micelles travel through a layer of water to the microvilli on the surface of the intestinal epithelial cells, where the fatty acids, 2-monoacylglycerols, and other dietary lipids are absorbed, but the bile salts are left behind in the lumen of the gut.

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