GIT Module 4th Week
CBL

A 22 years old male presented with repeated episodes of jaundice for last couple of years. His examination revealed lemon yellow scelera and liver palpable by 1 finger and tip of spleen also palpable while rest of general and systemic examination was unremarkable.

Lab Report 01:

TEST	NORMAL	PATIENT
Hb	13-16	10
Reticulocyte Count	<2%	6%
Bili Total	1.2	6.0
Bili Direct	1.0	2.0
ALT	40	35
ALP	200	170

The LFT of another patient with history of fever, nausea and occasional vomiting for 6 days, he was tender in his right upper qardarent of abdomen with tender liver palpable for 3 fingers are given below.

Lab Report 02:

TEST	NORMAL	PATIENT
Bili Total	1.2	12.0
Bili Direct	1.0	10.0
ALT	40	1500
ALP	200	300

The LFT of third patient are given below. She is 45 years old and presented with jaundice for 14 days which is progressively increasing, she has upper abdominal pain and hepatomegaly.

She also complains of dark colored urine and pale stools?

Lab Report 03:

TEST	NORMAL	PATIENT
Bili Total	1.2	12.0
Bili Direct	1.0	10.0
ALT	40	45
ALP	200	2500

QUESTIONS:

FOR QUESTIONS 1 TO 7 REFER TO LAB REPORT 1

Q:01 Which Organ Is Involved the given case, give reasons as well

Q:02 State The Types Of Jaundice

Q:03 What Is The Difference Between Conjugated And Unconjugated Bilirubin?

Q:04 Where does conjugation of bilirubin takes place and which enzyme in involved in the reaction?

Q:05 If we consider the lab report one as the report of the concerned patient what is the type of jaundice then?

Q:06 Why the reticulocyte count increase in this report?

Q:07 Why are the enzymes normal in this patient?

FOR QUESTIONS 8 ,9 REFER TO LAB REPORT 2

Q:08 What is type of jaundice predicted from lab report 3?

Q:09 What are the causes of hepatocellular jaundice?

FOR QUESTIONS 10 TO 12 REFER TO LAB REPORT 3

Q:10 What type of jaundice his present when report four is concerned?

Q:11 What are the causes of obstructive/post-hepatic jaundice?

Q:12 Describe the mechanism of bilirubin degradation along with the metabolites that give color to normal feeses and urine?

K E Y

FOR ANSWERS 1 TO 7 REFER TO LAB REPORT 1

Ans 01: Liver (reason – liver is the principle organ involved in the conjugation of the bilirubin, jaundice due to raised bilirubin, hepatomegaly that is Increase in the size of liver and raised lab levels of bilirubin in the lab report.

Ans 02: According to etiology

(a) pre-hepatic
(b) hepatic
(c) post-hepatic

Ans 03: Conjugated bilirubin is the kind of bililrubin which is water soluble in nature and is raised in both hepatic or obstructive/post-hepatic condition how ever unconjugated is Insoluble in water and raised in prehepatic and Enzyme deficiencies.

Ans 04: Site of conjugation of bilirubin is liver and the enzyme involves is uridine-5' diphospho- glucuronyl transferase.

Ans 05: Hemolytic jaundice (decreased Hb, normal liver enzymes & increase reticulocyte count, predominately raised indirect bilirubin)

Ans 06: In hemolytic jaundice the Hb level decreases, hence in compensation the bone marrow increases the production of RBCs.

Ans 07: The liver enzymes are normal in this patient as the etiology of jaundice is not the liver that is the hepatocytes are not evolved (cause is prehepatic)

FOR ANSWERS 8,9 REFER TO LAB REPORT 2

Ans 08: Heaptocellular jaundice, because of conjugated hyperbilirubenemia & raised liver enzymes

Ans 09: Acute hepatitis (viral,alcohol,parasites), hepatic toxicity due to drugs toxins etc.

FOR ANSWERS 10 TO 12 REFER TO LAB REPORT 3

Ans 10: The report indicates obstructive nature of jaundice because of direct hyper bilirubinemia and severely raised ALP

Ans 11: The causes of post hepatic jaundice are stones in the CBD, pancreatic cancer, worm infestation in biliary tract, fibrosis/ strictures of CBD etc.

Ans 12: Intestinal flora degrade bilirubin into urobilinogen which can be converted into stercobilinogen – stercobilin and excreted into feces or urobilinogen can be reabsorbed transported to kidneys and excreted into urine as urobilin.

Stercobilin is the compound which gives color to the feces.

Urobilin is the compound which gives color to the urine.