

LIVER  
DISORDER (JAUNDICE)

- Jaundice is also referred to as icterus, and is an important clinical manifestation to liver diseases and biliary system, characterised by deposition of bilirubin leading to yellow coloration of plasma, visible mucous membrane and other tissues

# Etiology

On the basis of etiology jaundice can be of three types

- Hemolytic jaundice/ Prehepatic jaundice/ over production jaundice
- Hepatocellular jaundice/ Hepatic jaundice/ Intrahepatic jaundice
- Obstructive jaundice/ extrahepatic jaundice/post- hepatic jaundice

# Hemolytic jaundice/Prehepatic jaundice

- Hemoprotozoan (trypanosomiasis, babesiosis, anaplasmosis, theileriosis etc.)
- Viral and bacterial toxins (leptospirosis, bacillary haemoglobinuria, infectious anemia)
- Inorganic and organic toxins (chronic copper poisoning, Se toxicity)
- Plant toxins

# Hepatocellular jaundice/ Hepatic jaundice

- Infections and toxins causing hepatitis/ hepatosis

# Obstructive jaundice/extrahepatic jaundice

- Bile duct obstruction (biliary calculi, infection with nematodes and trematodes are the common causes of bile duct obstruction )

# Pathogenesis

- Hemolytic jaundice

Excessive destruction of RBC



Excessive bilirubin formation



**Limit of liver threshold is crossed**

Accumulation of unconjugated bilirubin in circulation

- Hepatocellular jaundice/ Hepatic jaunice

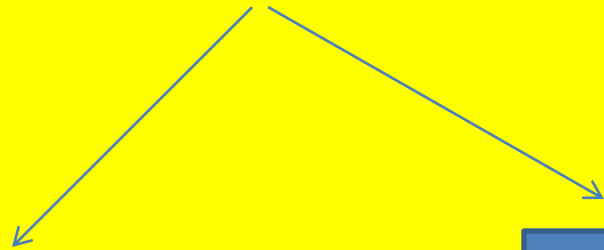
## Hepatocellular damage

Decrease capacity of hepatic cells to conjugate free bilirubin

Intrahepatic cholestasis occurs due to swelling of hepatocytes and oedema

Accumulation of free bilirubin in circulation

Diffusion of conjugated bilirubin in circulation





# Obstructive jaundice/extrahepatic jaundice

Bile duct obstruction

Conjugated bilirubin can not pass into intestine

Diffusion of conjugated bilirubin from bile duct into circulation

Increased level of conjugated bilirubin in serum

# Van den Bergh reaction

<b>Haemolytic jaundice</b>	<b>Hepatocellular jaundice</b>	<b>Obstructive jaundice</b>
<b>Indirect</b>	<b>Biphasic</b>	<b>Direct</b>

# Clinical findings

- Yellowish discoloration of mucous membranes and skin
- Anorexia
- Anaemia
- Muscular weakness
- Mental depression
- In terminal stage recombency and coma
- In hepatocellular Jaundice hepatic enlargement and pain on hepatic palpation
- Obstructive jaundice reveals light or clay colored faeces

# Diagnosis

- ✓ History and clinical signs
- ✓ Estimation of Direct, Indirect and Total bilirubin
- ✓ Van den Bergh test
- ✓ Urine examination

# Treatment

- Primary cause should be eliminated
- Affected animals should be given carbohydrates rich, palatable and laxative diet
- Diet should have minimum amount of fat
- Intramuscular administration of liver tonics and vitamin B complex @ 5-10ml once daily in large animals for 4-6 days helps in early recovery

*Thanks*