



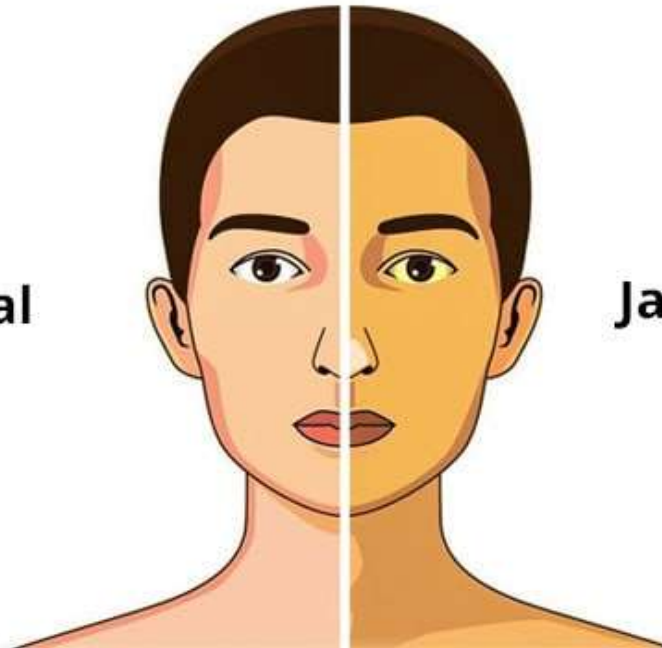
**SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES**

Sathy Main Road, SNS Kalvi Nagar,  
Saravanampatti Post, Coimbatore - 641 035,  
Tamil Nadu.



# Jaundice

**Normal**



**Jaundice**

[www.jaipurgastro.com](http://www.jaipurgastro.com)

## INTRODUCTION

- Jaundice also known as icterus, is a yellowish or greenish pigment of the skin and sclera due to high bilirubin level in blood.
- Normal level of bilirubin: 1.0 mg/dl
- Hyperbilirubinemia: 2-3 mg/dl.

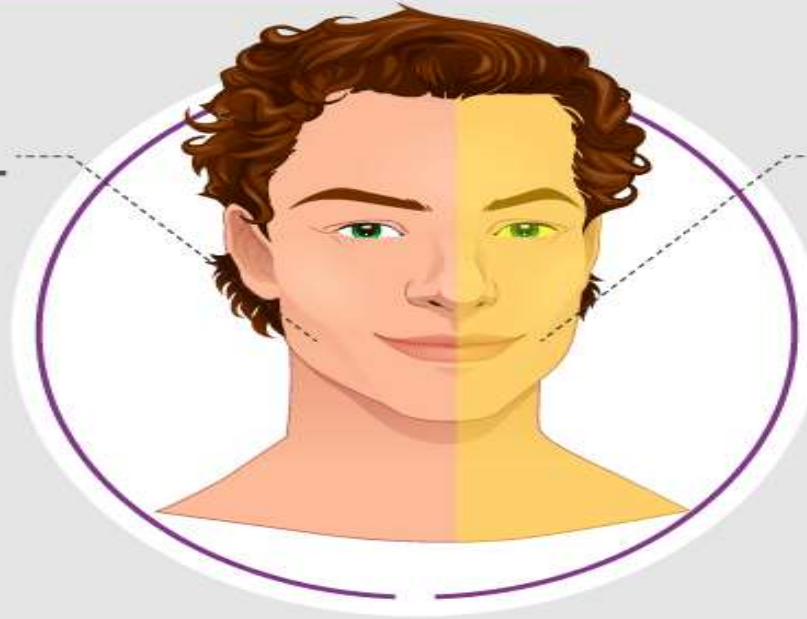
## EPIDEMIOLOGY

- Jaundice in adults is rare.
- Under the five year DISCOVERY programme in the UK, annual incidence of jaundice was 0.74 per 1000 individuals over age 45.
- Jaundice is commonly associated with severity of disease with an incidence of up to 40% of patients requiring intensive care in ICU experiencing jaundice.

# SYMPTOMS

## JAUNDICE SYMPTOMS

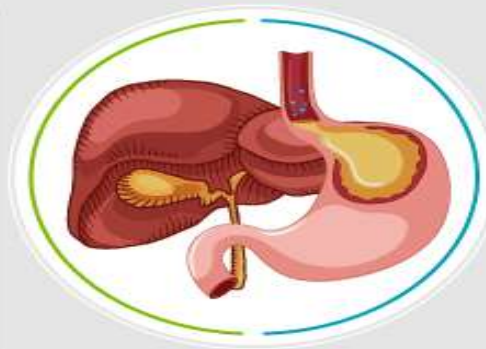
NORMAL



JAUNDICE

### CAUSES

- Acute inflammation of liver
- Inflammation of the bile duct
- Obstruction of the bile duct
- Hemolytic anemia
- Gilbert's syndrome



### SYMPTOMS

- Itchiness
- Abdominal pain
- Weight loss
- Vomiting
- Paler than usual stool
- Fatigue
- Dark urine

## ETIOLOGY

- **Pre-hepatic/hemolytic:** The pathology occurs prior to the liver metabolism, due to either intrinsic causes to red blood cell rupture or extrinsic causes to red blood cell rupture.
- **Hepatic/hepatocellular:** The pathology is due to damage of parenchymal liver cells.
- **Post-hepatic/cholestatic:** The pathology occurs after bilirubin conjugation in the liver, due to obstruction of the biliary tract and/or decreased bilirubin excretion.

# PATHOGENESIS

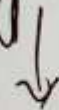
pathogenesis:

Normally

⊙ RBC

↓ on Haemolysis

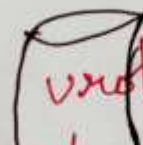
unconjugated Bilirubin



Conjugated Bilirubin



→ Biliary tract



urobilinogen



stercobilin

→ into blood stream



urobilinogen in urine

In faeces

Dark brown

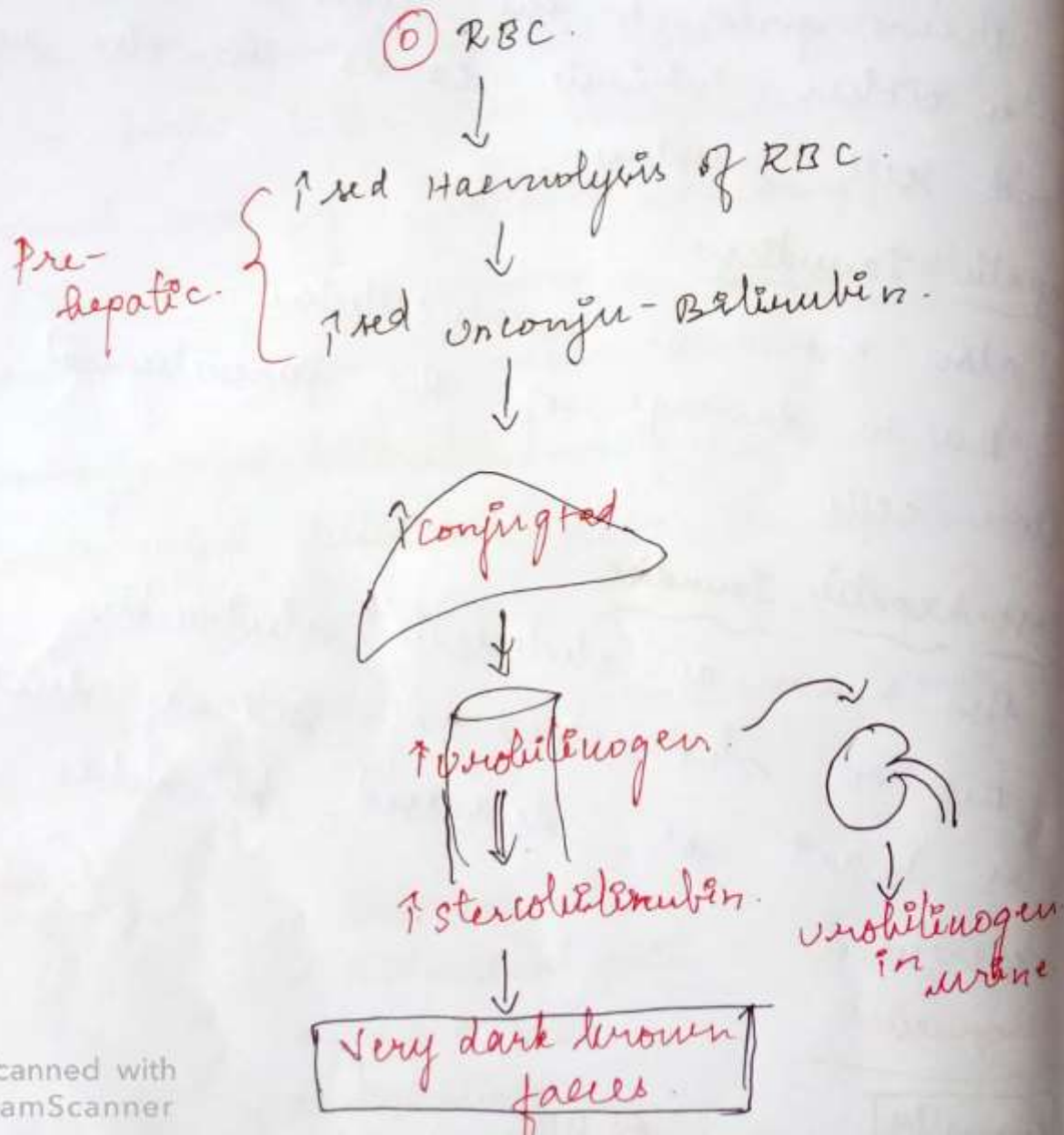
CS

Scanned with CamScanner

## Pre hepatic causes

- Pre-hepatic jaundice is most commonly caused by a pathological increased rate of red blood cell (erythrocyte) hemolysis.
- The increased breakdown of erythrocytes → increased unconjugated serum bilirubin → increased deposition of unconjugated bilirubin into mucosal tissue.
- The following diseases may cause jaundice due to increased erythrocyte hemolysis:
  - Sickle cell anemia
  - Thalassemia
  - Pyruvate kinase deficiency
  - Haemolytic anemia.

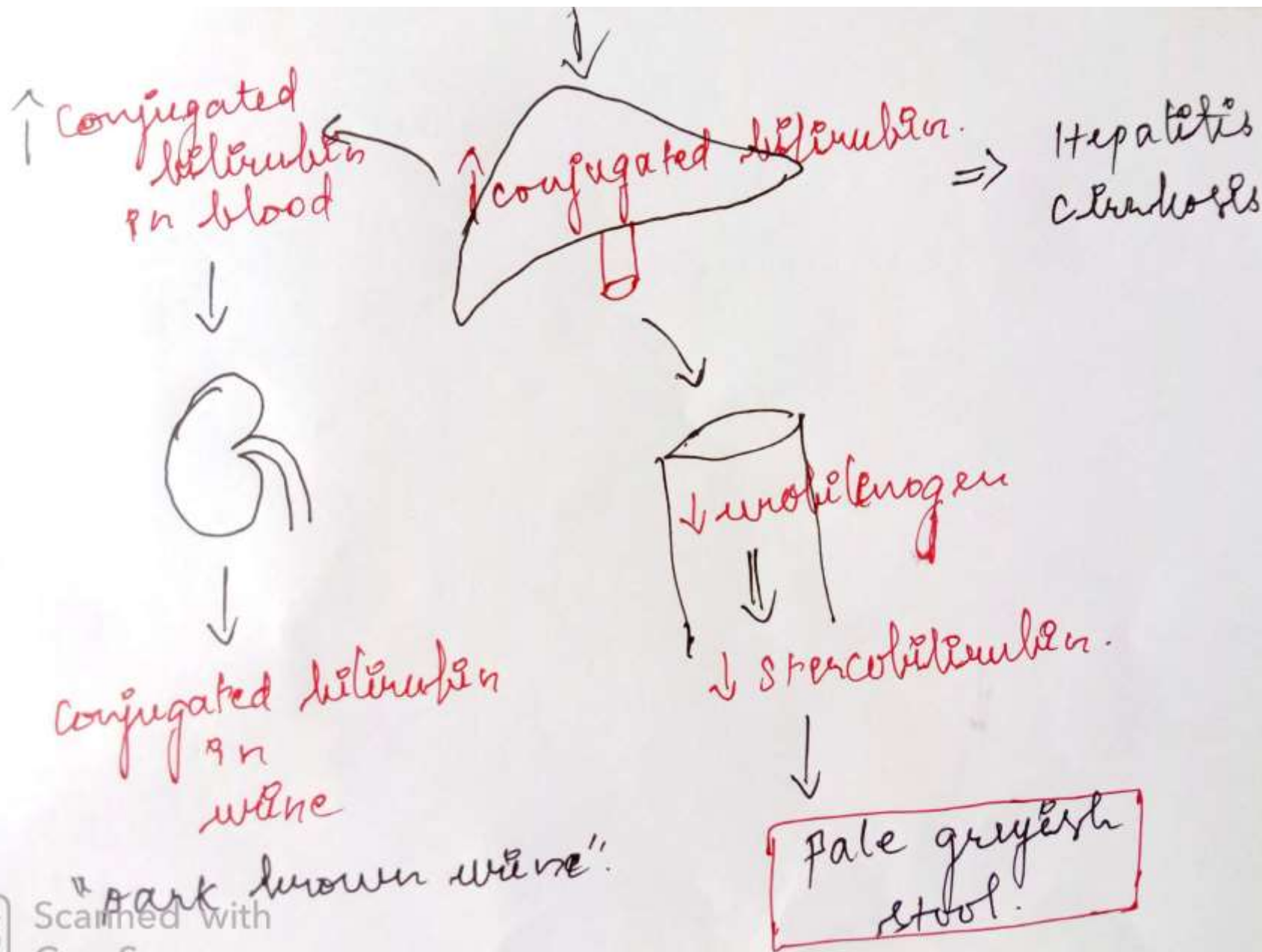
Pre-hepatic Jaundice: (Haemolytic).



## Hepatic causes

- Hepatic jaundice is caused by abnormal liver metabolism of bilirubin.
- The major causes of hepatic jaundice are significant damage to hepatocytes — due to infectious, drug/medication-induced, auto-immune etiology — or, less commonly, due to inheritable genetic diseases.
- The following is a non-exhaustive list of hepatic causes to jaundice:
  - Acute and chronic hepatitis
  - Hepatotoxicity
  - Drug induced hepatitis
  - Alcoholic liver disease
  - Cirrhosis

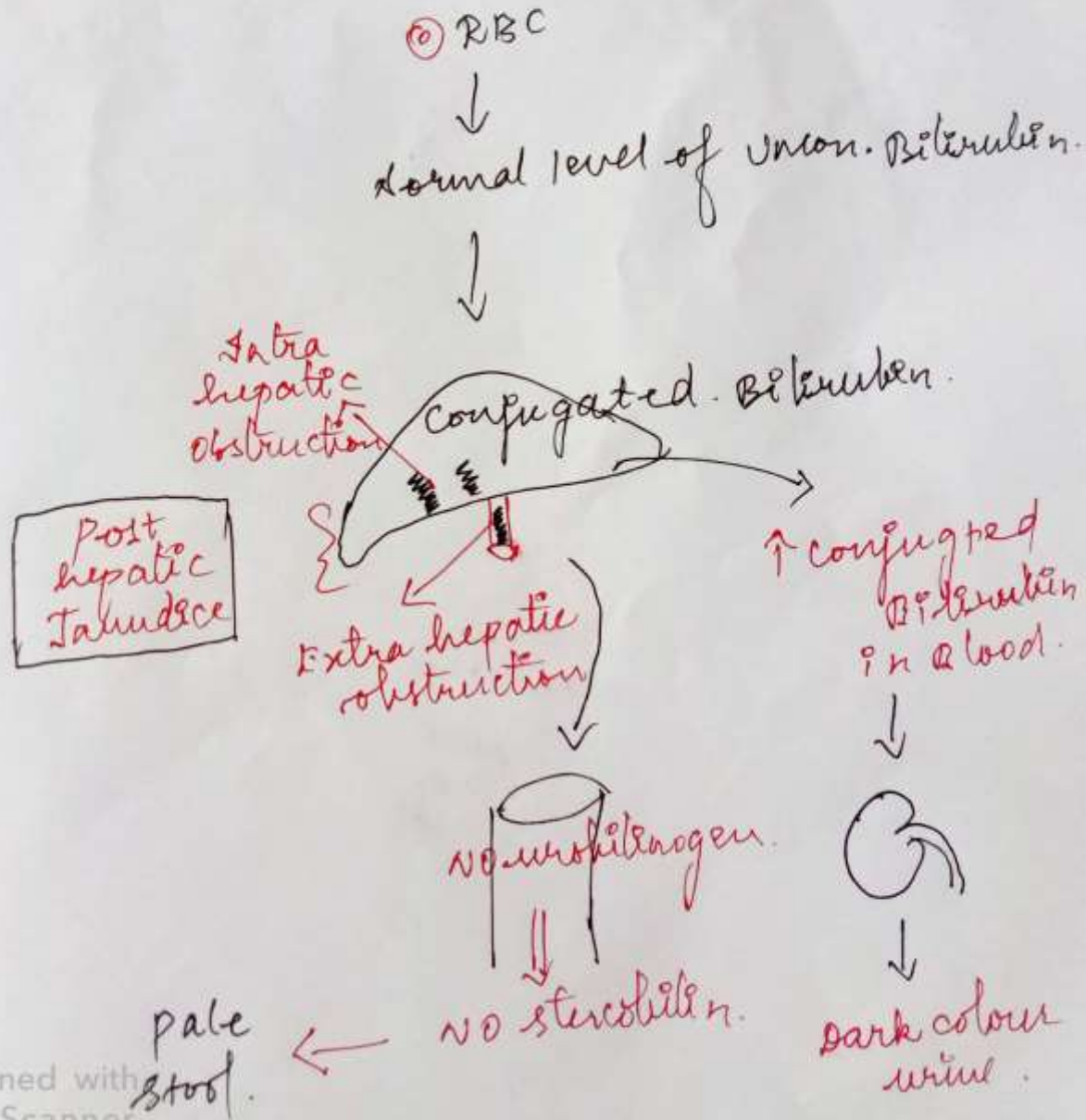




## Post hepatic causes

- Post-hepatic jaundice (obstructive jaundice), is caused by a blockage of bile ducts which transport bile containing conjugated bilirubin out of the liver for excretion.
- The following is a list of conditions that can cause post-hepatic jaundice:
  - Acute and chronic pancreatitis
  - Choledocholithiasis
  - Biliary atresia
  - Pancreatic cancer
  - Cholangitis

# Post-hepatic Jaundice: (obstructive).



## **DIAGNOSIS**

- Bilirubin test
- Viral test for hepatitis
- Liver function test
- Blood count
- Abdominal CT scan
- Abdominal Ultrasound
- Liver biopsy
- Cholesterol level estimation

## **TREATMENT**

- Iron supplements for anemia induced jaundice.
- Anti viral drugs for Hepatitis.
- Iv fluid administration
- Diet and vitamin D, K supplements.



***Thank You!***

