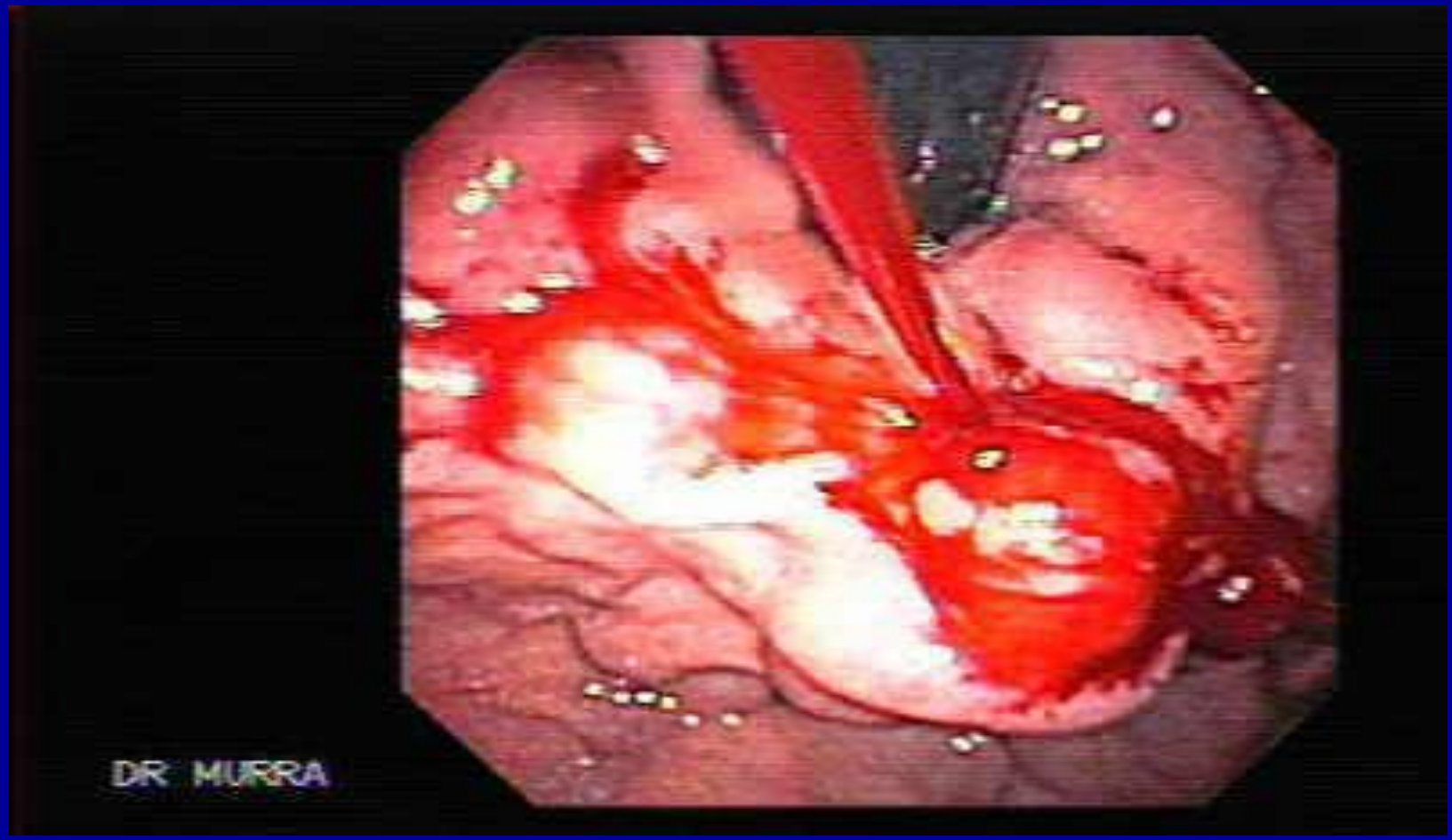
Upper GI bleeding



UPPER GI BLEEDING

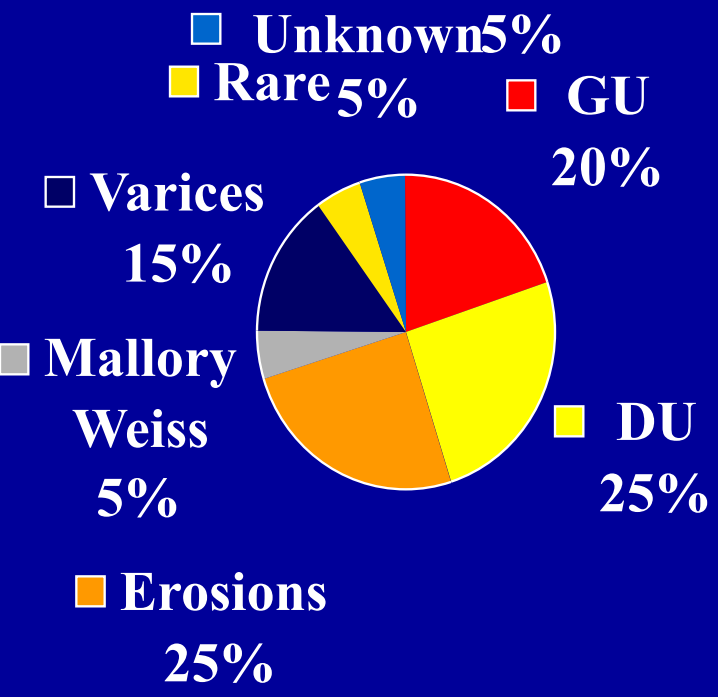
Signs and Symptoms

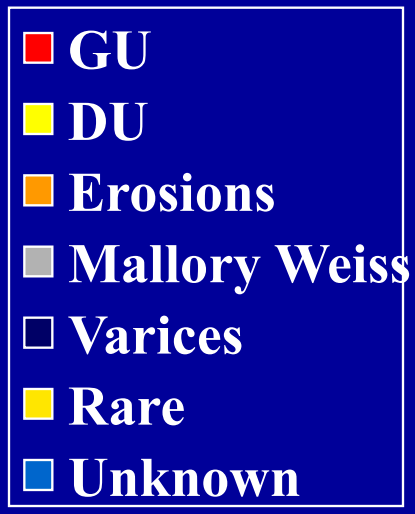
- Hematemesis
- Melena
- Dizziness
- Abd. Pain and symptoms of Peptic ulcer disease
- Hx of NSAID's use

- Pallor
- Hypotension
- Orthostasis
- Jaundice and other stigmatas of chronic liver diseases

UPPER GI BLEEDING

CAUSES





RARE CAUSES

Neoplasms

AVM/Ectasia

Dieulafoy's

Stoma ulcers

Esophageal ulcers

Deodenitis

Hemobilia

Aorto-enteric fistulas

UPPER GI BLEEDING

Peptic Ulcer Disease

- Defect in the GI mucosa extending through the muscularis mucosa.
- Decreasing incidence.
- Caused by imbalance between the aggressive and defensive factors.

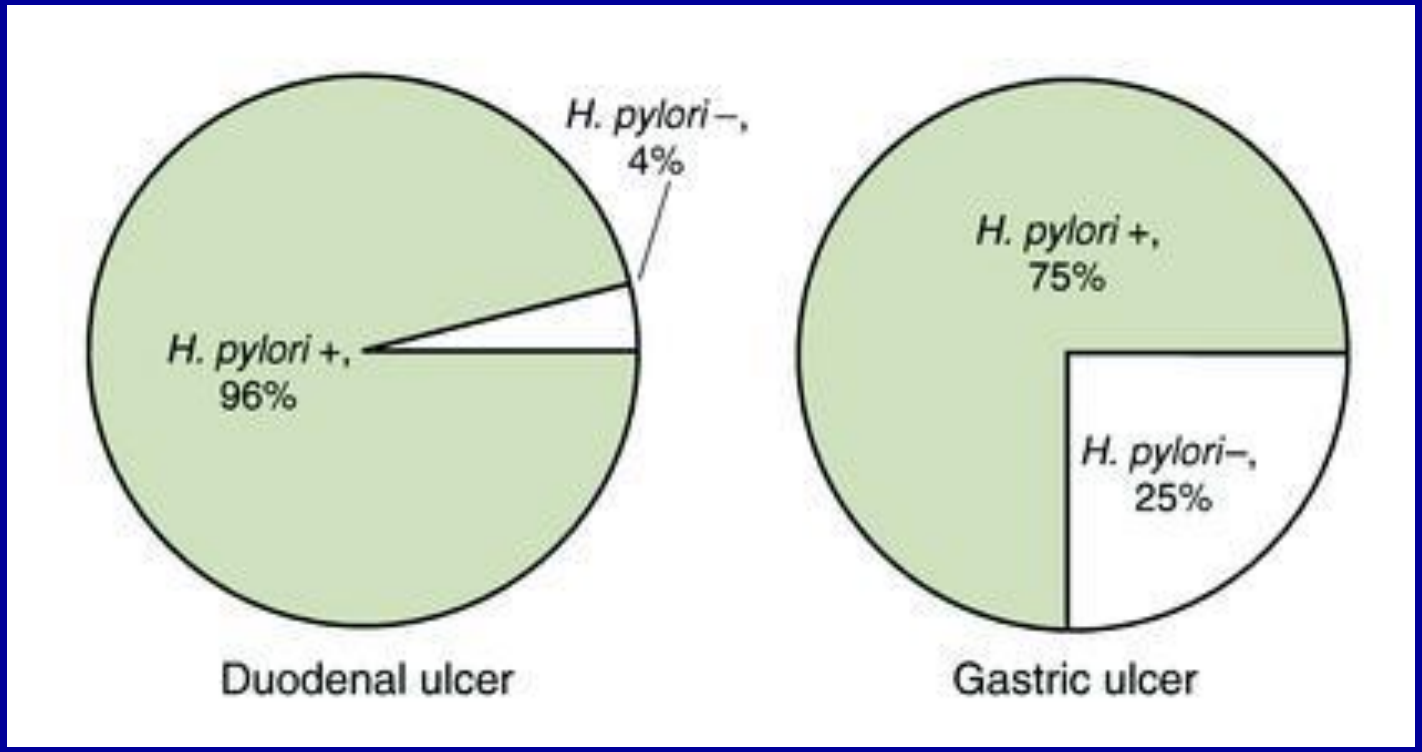
UPPER GI BLEEDING

Peptic Ulcer Disease

- Helicobacter Pylori
- NSAID's
- Acid Hypersecretory state.
- Antral G cell Hyperplasia

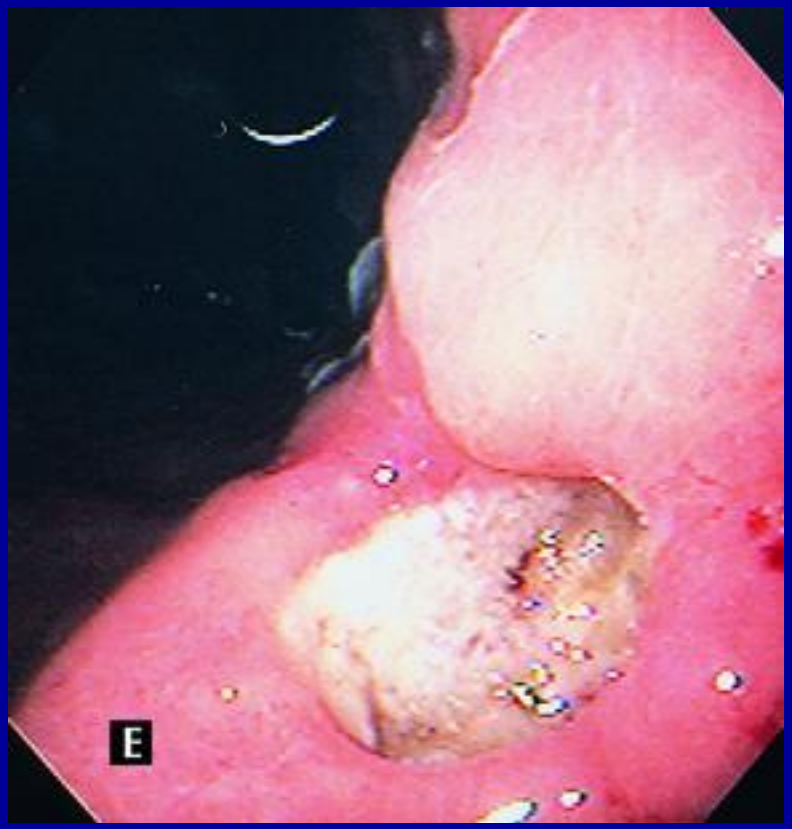
UPPER GI BLEEDING

Peptic Ulcer Disease



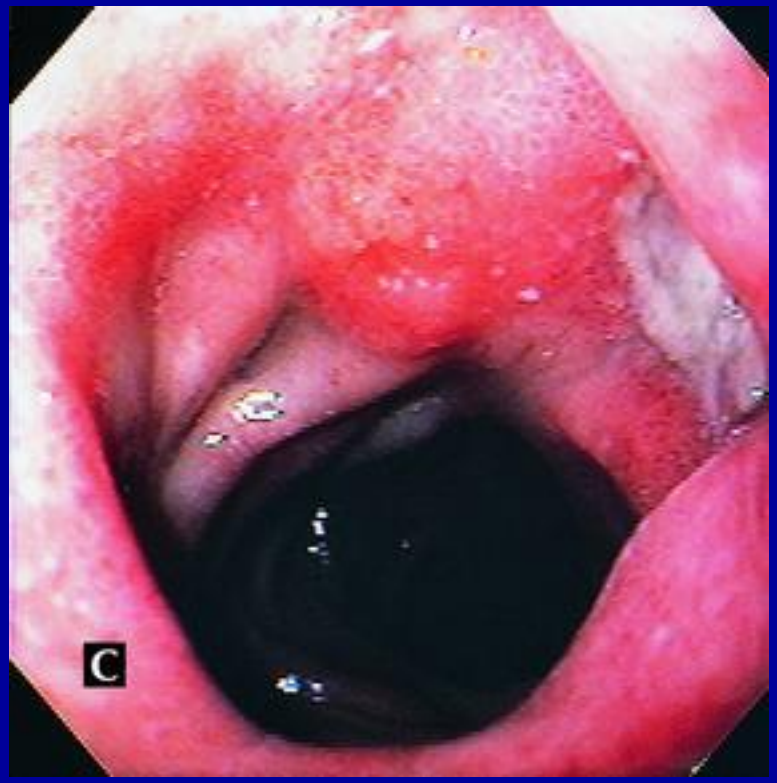
UPPER GI BLEEDING

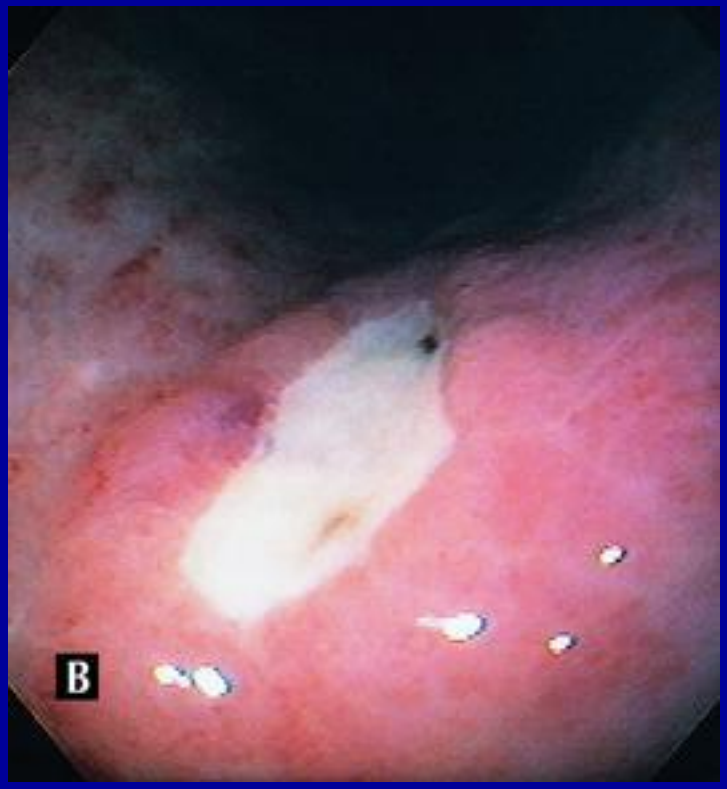
Gastric Ulcers



UPPER GI BLEEDING

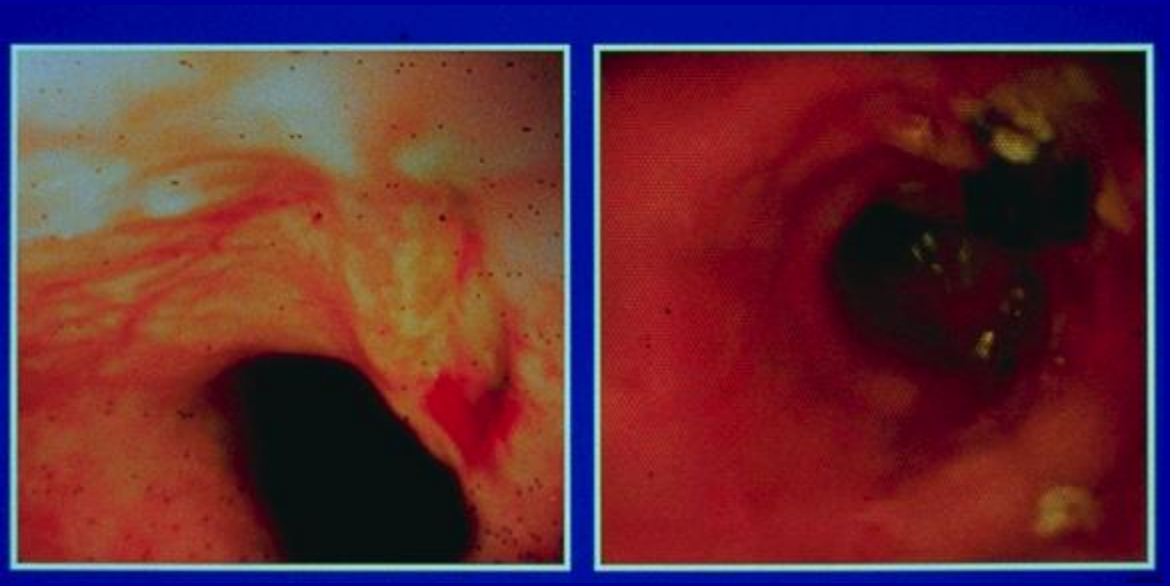
Duodenal Ulcers





UPPER GI BLEEDING

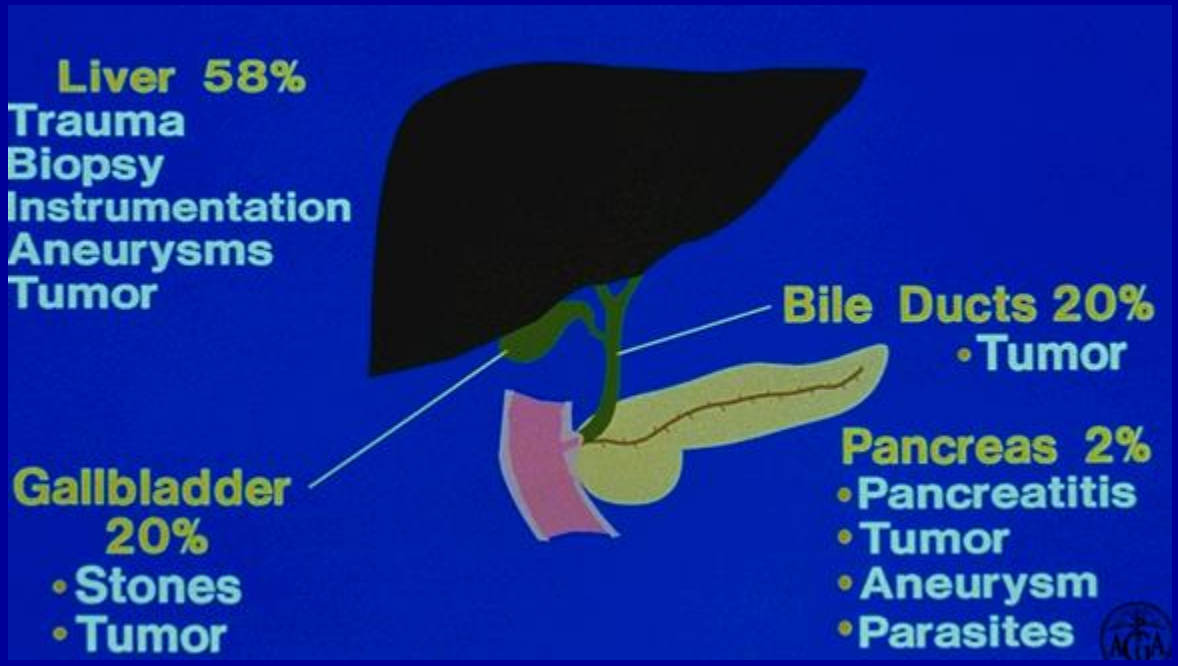
Mallory - Weiss



Laceration around the GE junction
Classical presentation as bleeding after episode of vomiting
Classical presentation found in 50% only
Self- limiting

UPPER GI BLEEDING

Hemobilia



UPPER GI BLEEDING

Hemobilia

UPPER GI BLEEDING

stress ulcers

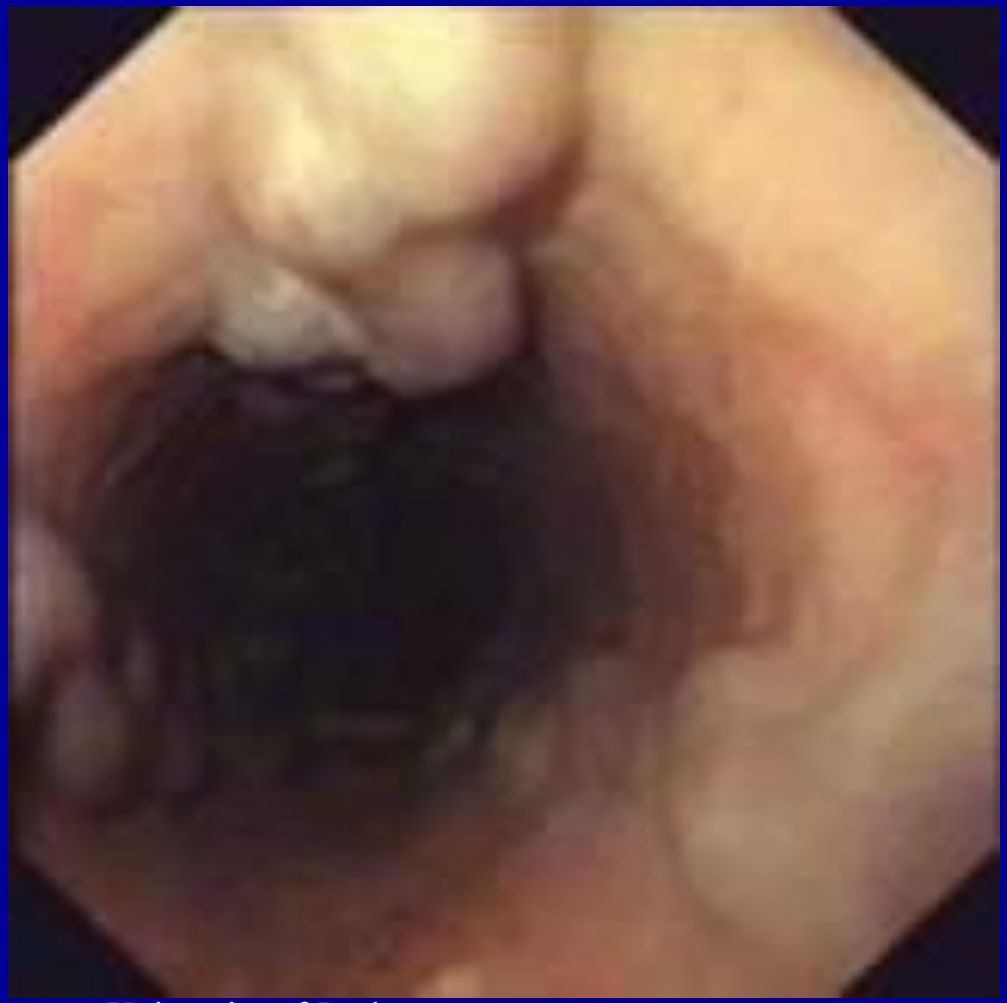
•Caused by Vagal hyperstimulation and vascular hypoperfusion.
•Body and fundus more affected
•Multiple
•Prophylaxis is indicated in critically ill ICU patients

Curling Extensive burn

Cushing Head Injury

UPPER GI BLEEDING

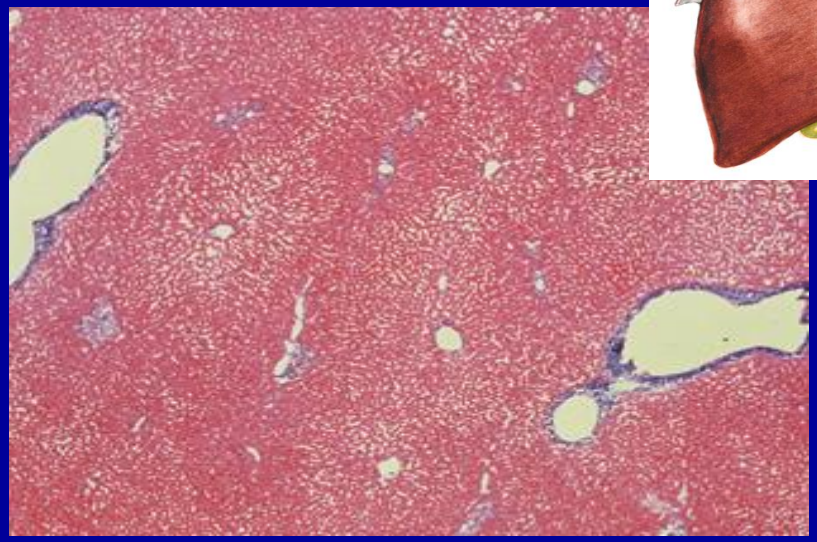
BLEEDING ESOPHAGEAL VARICEAL

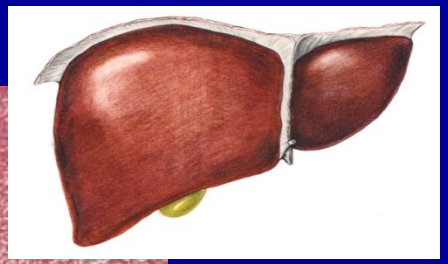


- Dilated tortuous veins of the lower and mid esophagus.
- Secondary to portal HTN
- 30% mortality after the first episode.
- 60% Rebleeding rate

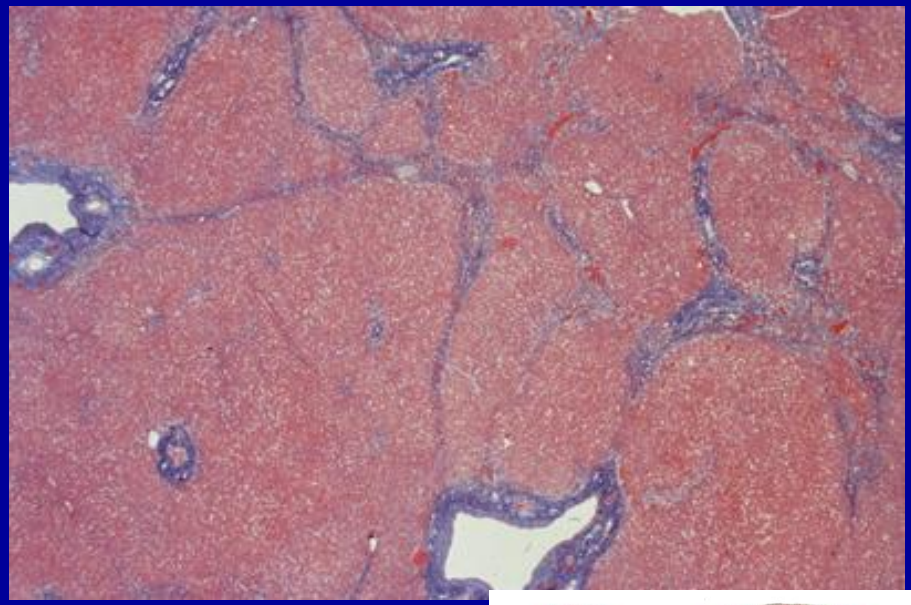
Cirrhosis and Portal hypertension

Healthy Liver

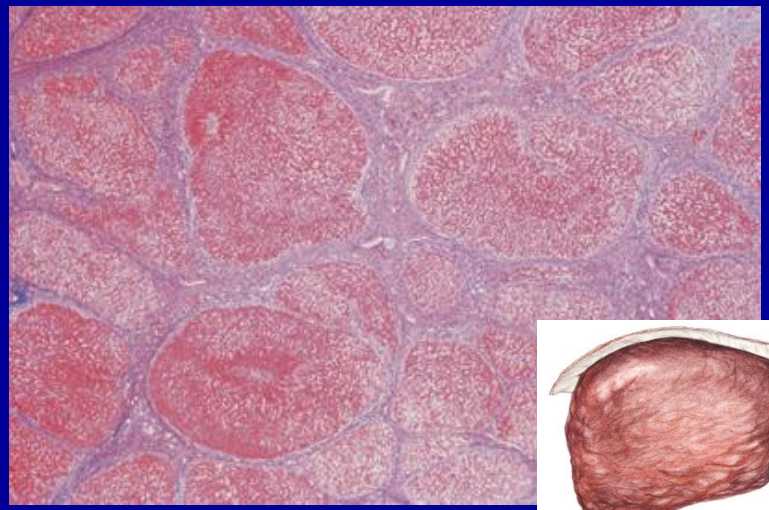


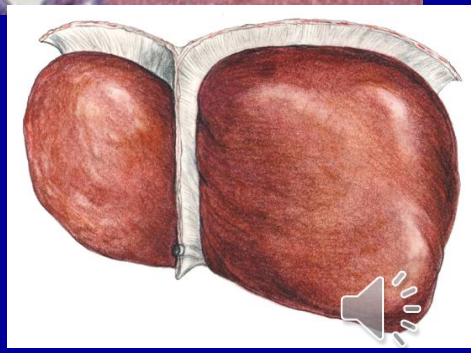


Liver Fibrosis



Cirrhosis





Jaundice

Accumulation of bilirubin in the blood stream causing yellowish discoloration of plasma and heavily perfused tissues

Spider Angiomas

Small, centrally raised bumps (papules) caused by a dilated arteriole (small artery). A network of dilated capillaries (tiny blood vessels) radiate from the arteriole. Pressing on the lesion causes the redness to disappear briefly, and there is a rapid return of redness once the pressure is lifted.

Finger Clubbing

a condition where there is enlargement of the terminal end of the digit over the distal phalanx.

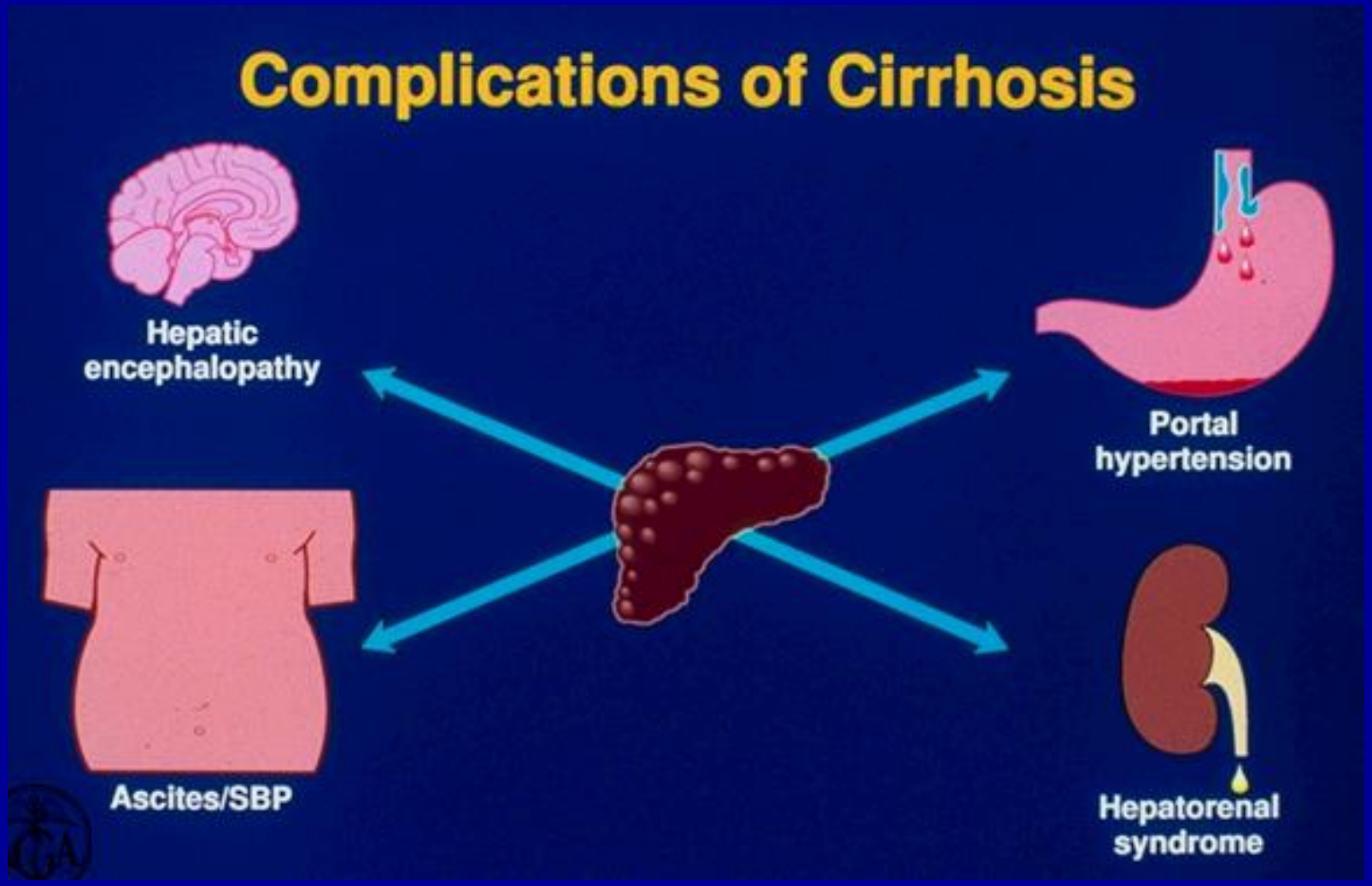
It is usually symmetrical and affects the fingers

Gynecomastia

Breast development in men

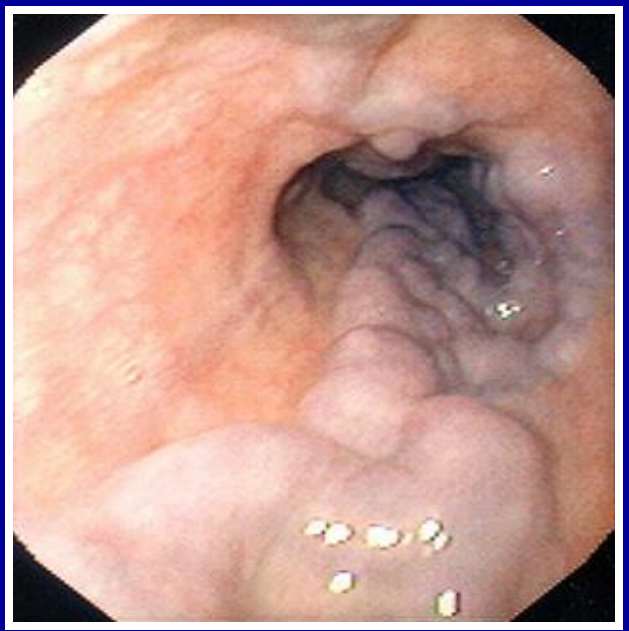
Dupuytren's Contractures

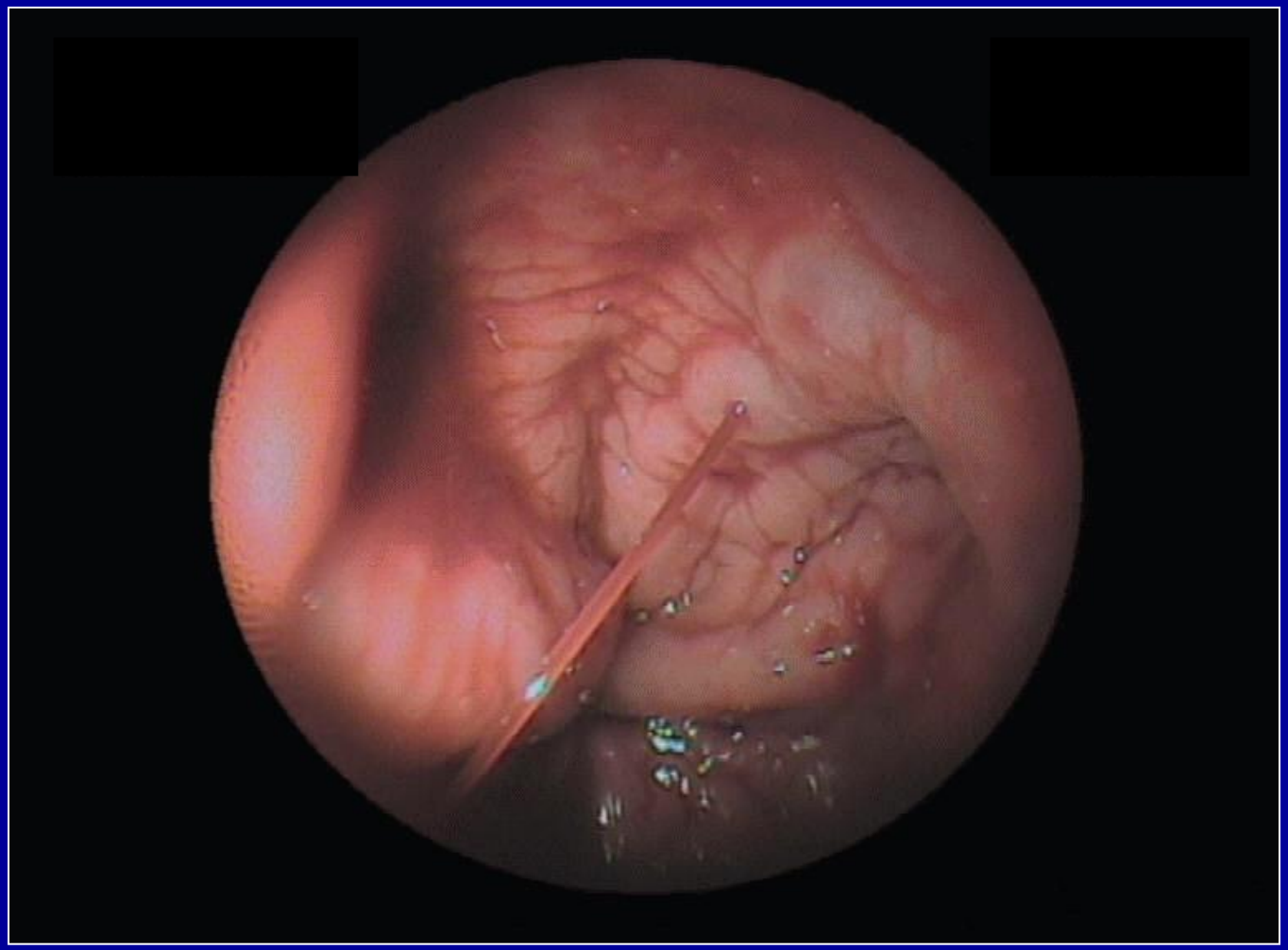
Joint contractures

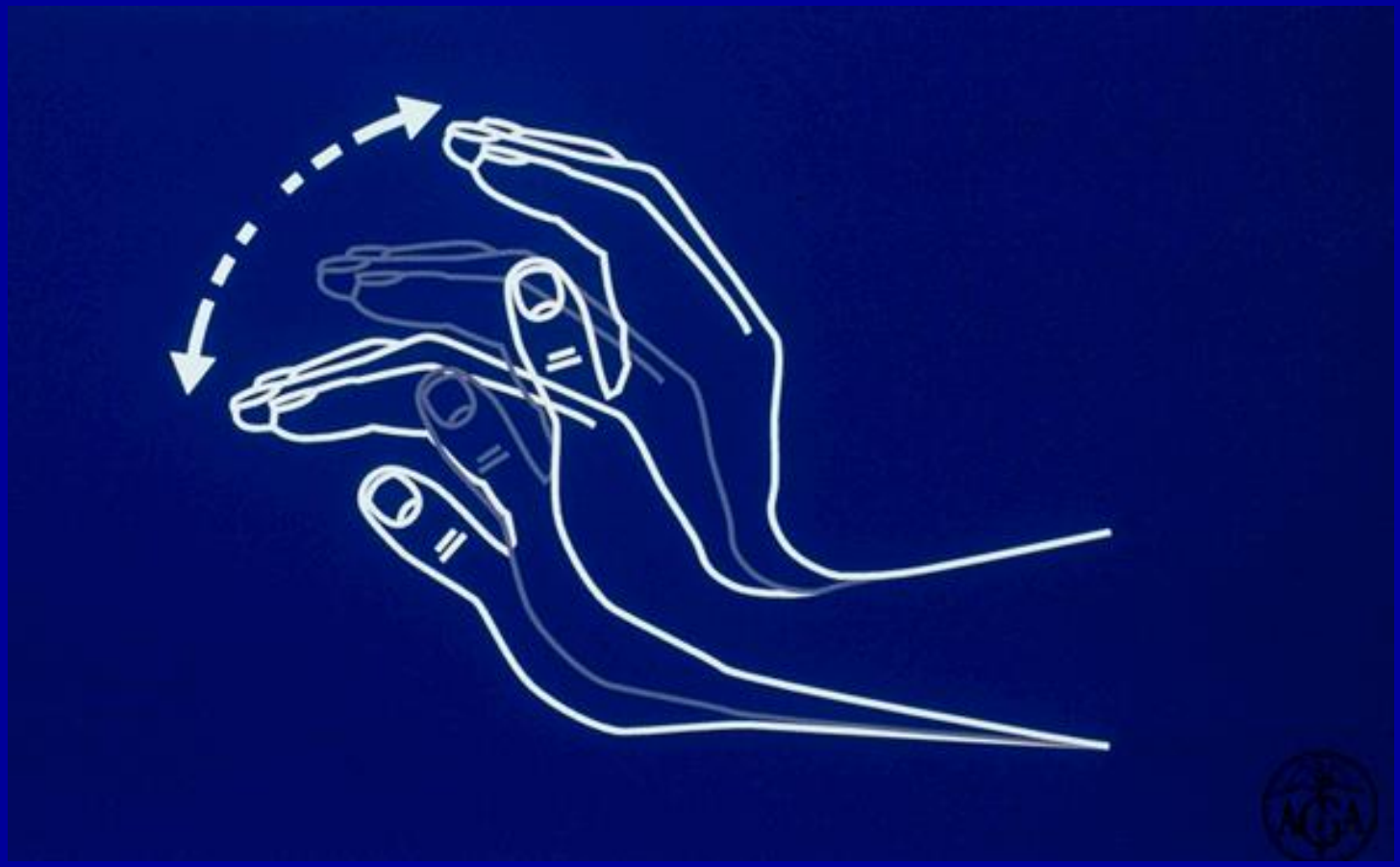

Complications of Cirrhosis
Hepatic encephalopathy
Portal hypertension
Ascites/SBP
Hepatorenal syndrome

Caput Medusae

Distended and engorged umbilical veins which are seen radiating from the umbilicus across the abdomen to join systemic veins.

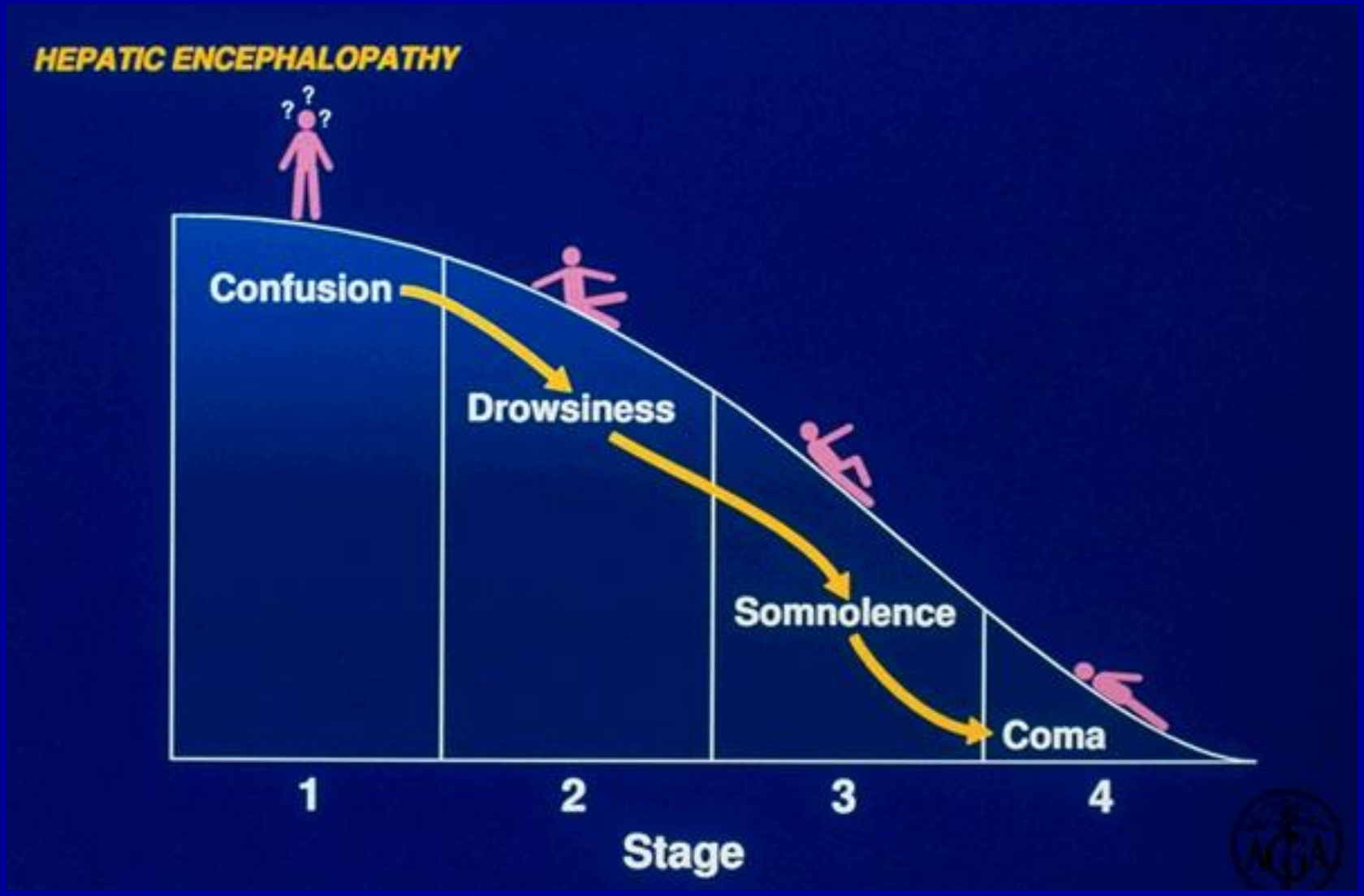






Astraxia

Flapping tremors, quick arrythmic movement in back ground tonic muscle contracion


HEPATIC ENCEPHALOPATHY
Confusion
Drowsiness
Somnolence
Coma
1
2
3
4
Stage

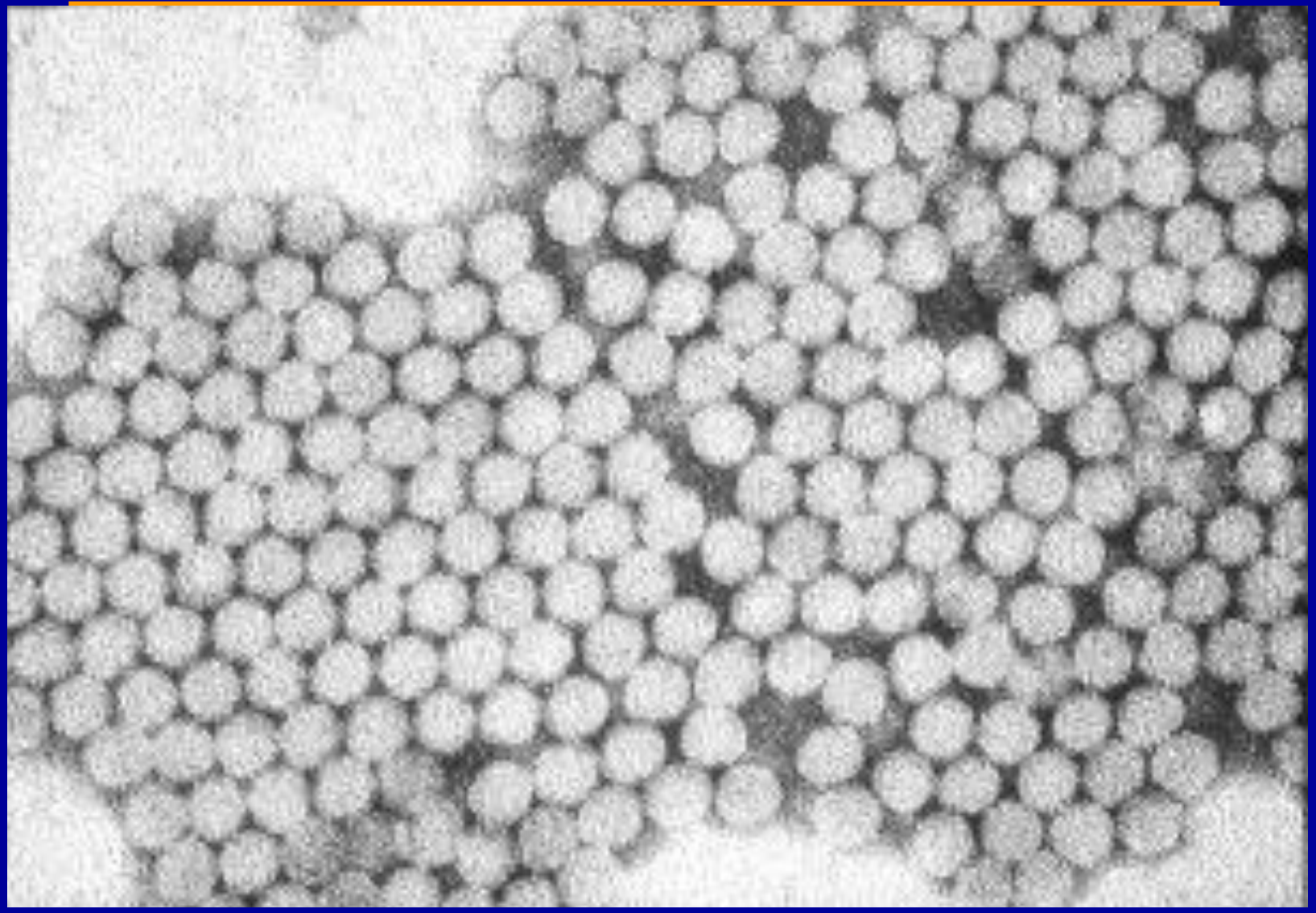
Hepatitis A-E Viruses

An Overview

Type of Hepatitis

	A	B	C	D	E
Source of virus	feces	blood/ blood-derived body fluids	blood/ blood-derived body fluids	blood/ blood-derived body fluids	feces
Route of transmission	fecal-oral	percutaneous permucosal	percutaneous permucosal	percutaneous permucosal	fecal-oral
Chronic infection	no	yes	yes	yes	no
Prevention	pre/post-exposure immunization	pre/post-exposure immunization	blood donor screening; risk behavior modification	pre/post-exposure immunization; risk behavior modification	ensure safe drinking water

Hepatitis A Virus

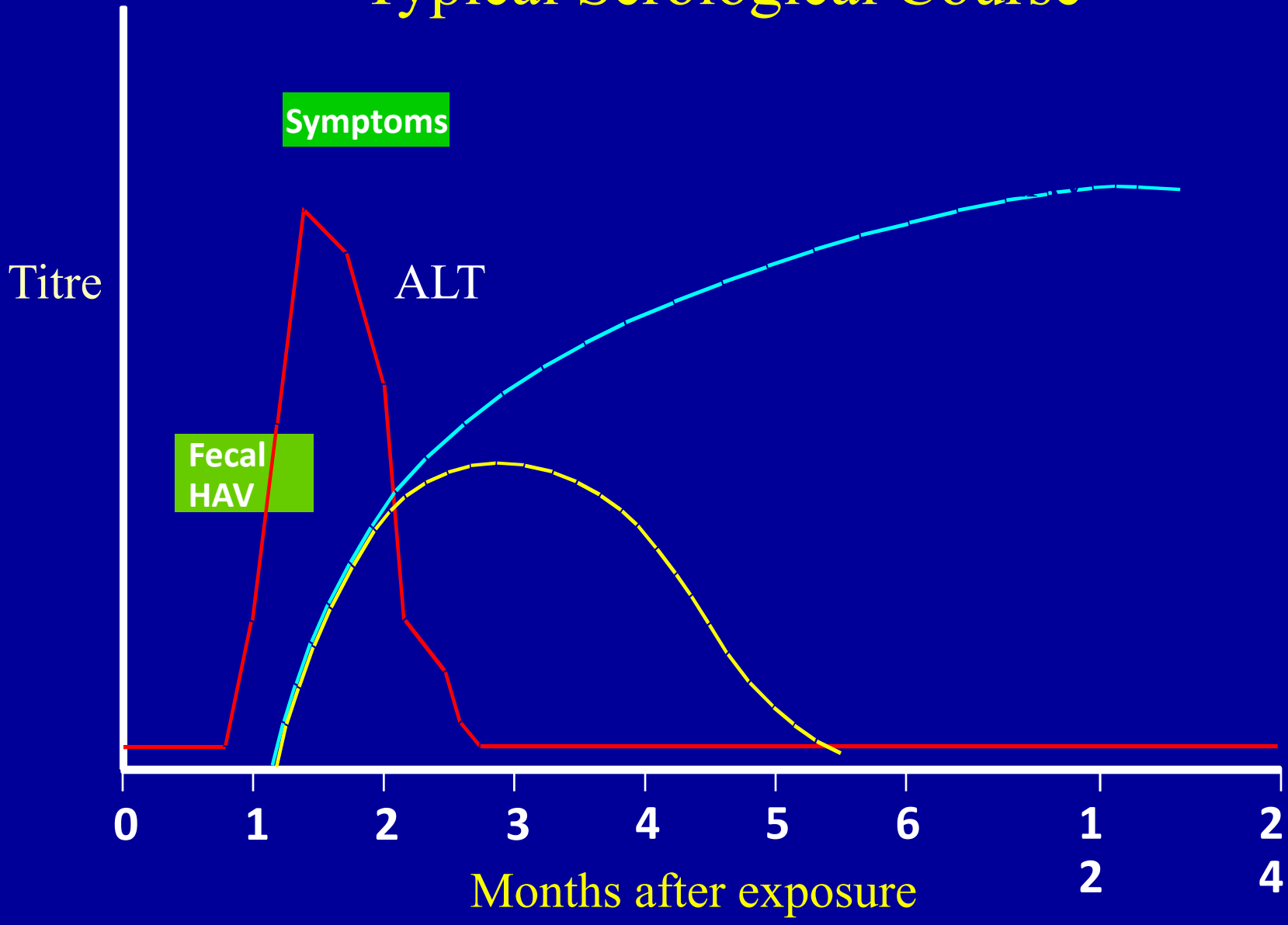


Hepatitis A - Clinical Features

- Incubation period: Average 30 days
  Range 15-50 days
- Jaundice by age group: <6 yrs, <10%
  6-14 yrs, 40%-50%
  >14 yrs, 70%-80%
- Complications: Fulminant hepatitis
  Cholestatic hepatitis
  Relapsing hepatitis
- Chronic sequelae: None

Hepatitis A Infection

Typical Serological Course



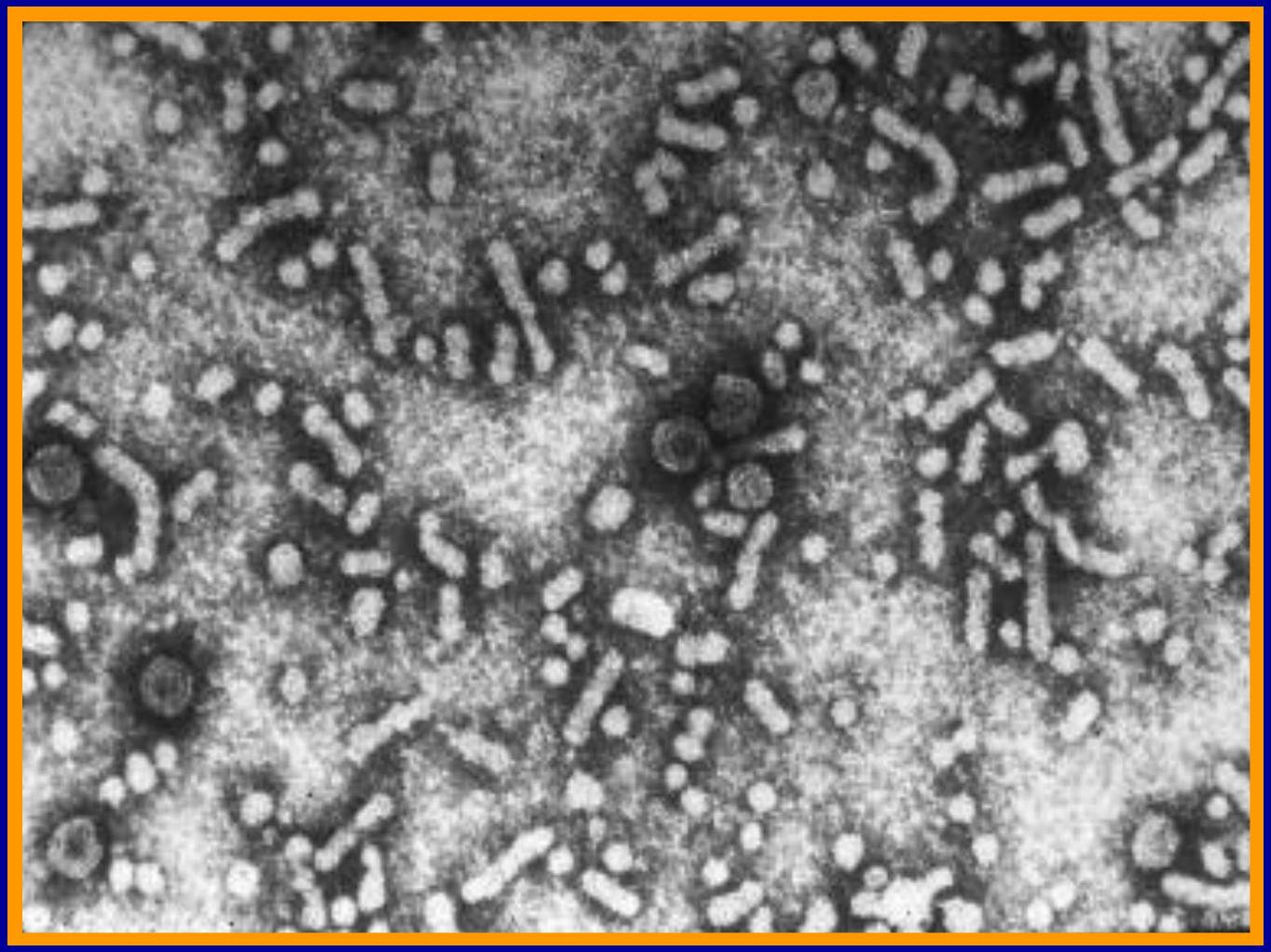
Hepatitis A Virus Transmission

- **Close personal contact**
  (e.g., household contact, sex contact, child day care centers)
- **Contaminated food, water**
  (e.g., infected food handlers, raw shellfish)
- **Blood exposure (rare)**
  (e.g., injecting drug use, transfusion)

Laboratory Diagnosis

- Acute infection is diagnosed by the detection of HAV-IgM in serum by EIA.
- Past Infection i.e. immunity is determined by the detection of HAV-IgG by EIA.

Hepatitis B Virus



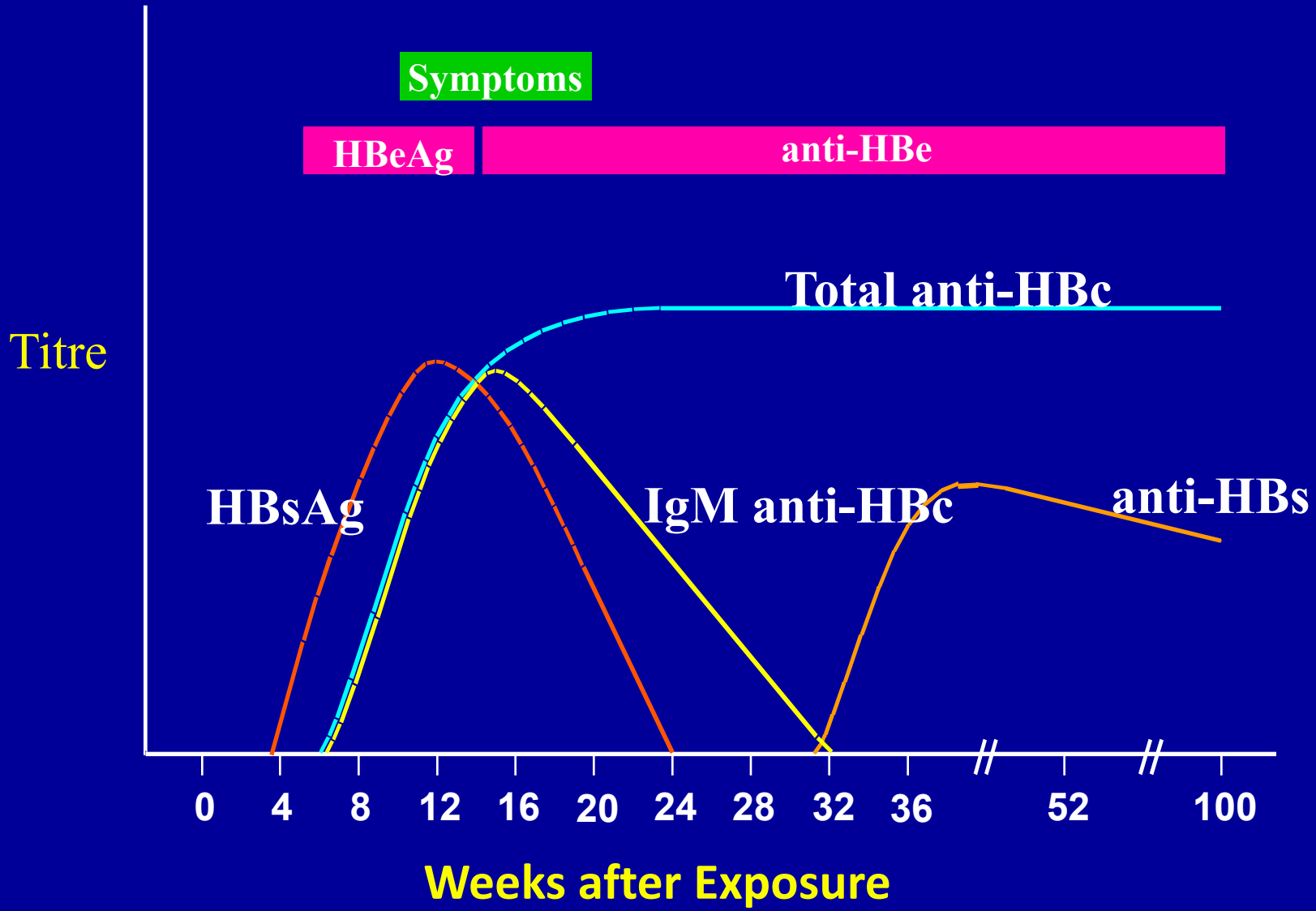
Hepatitis B - Clinical Features

Incubation period:	Average 60-90 days Range 45-180 days
Clinical illness (jaundice):	<5 yrs, <10% 5 yrs, 30%-50%
Acute case-fatality rate:	0.5%-1%
Chronic infection:	<5 yrs, 30%-90% 5 yrs, 2%-10%
Premature mortality from chronic liver disease:	15%-25%

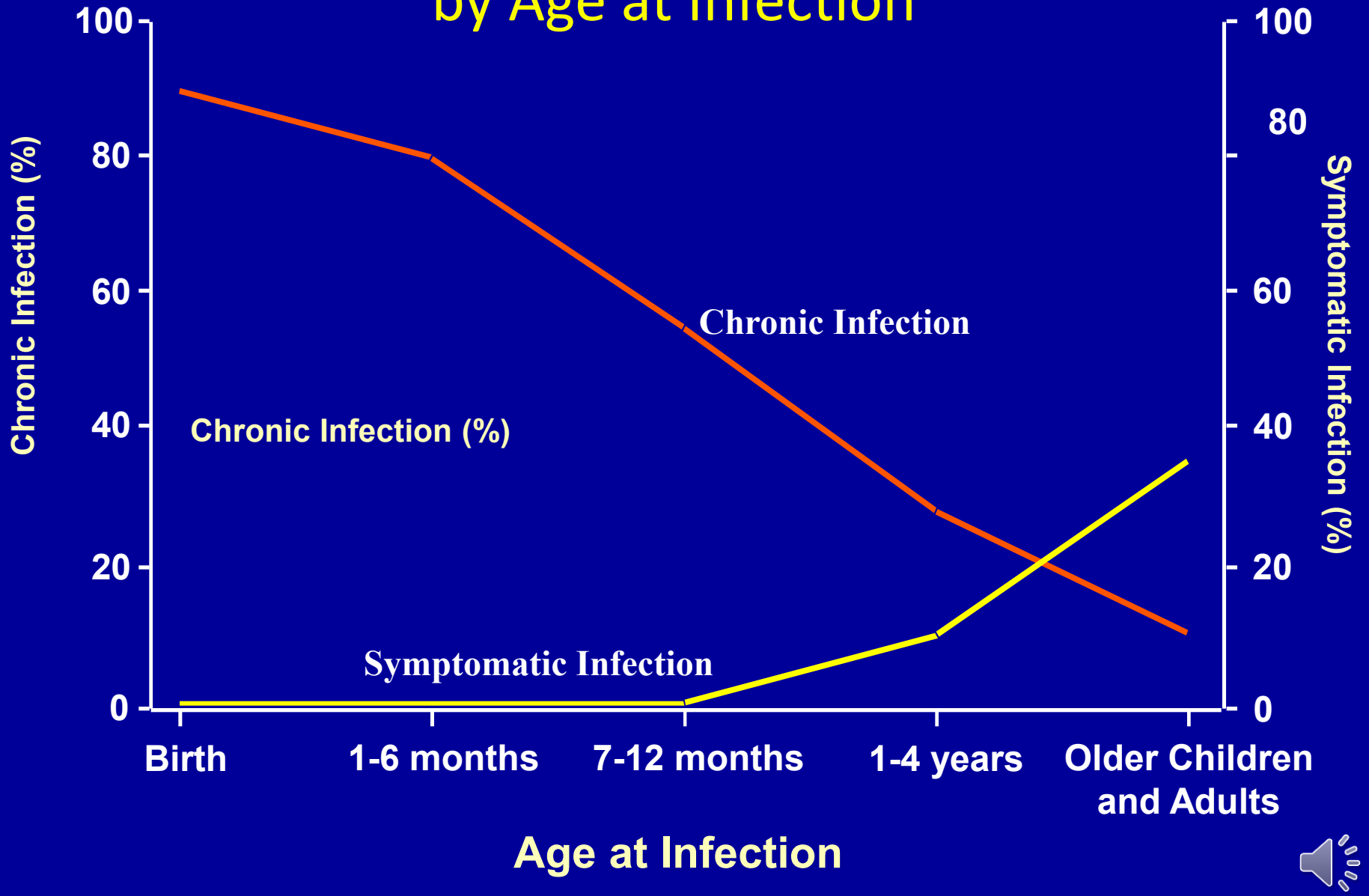
Spectrum of Chronic Hepatitis B Diseases

1. Chronic Persistent Hepatitis - asymptomatic
2. Chronic Active Hepatitis - symptomatic exacerbations of hepatitis
3. Cirrhosis of Liver
4. Hepatocellular Carcinoma

Acute Hepatitis B Virus Infection with Recovery Typical Serologic Course



Outcome of Hepatitis B Virus Infection by Age at Infection



Concentration of Hepatitis B Virus in Various Body Fluids

High	Moderate	Low/Not Detectable
blood	semen	urine
serum	vaginal fluid	feces
wound exudates	saliva	sweat
		tears
		breastmilk

Hepatitis B Virus
Modes of Transmission

- Sexual - sex workers and homosexuals are particular at risk.
- Parenteral - IVDA, Health Workers are at increased risk.
- Perinatal - Mothers who are HBeAg positive are much more likely to transmit to their offspring than those who are not. Perinatal transmission is the main means of transmission in high prevalence populations.

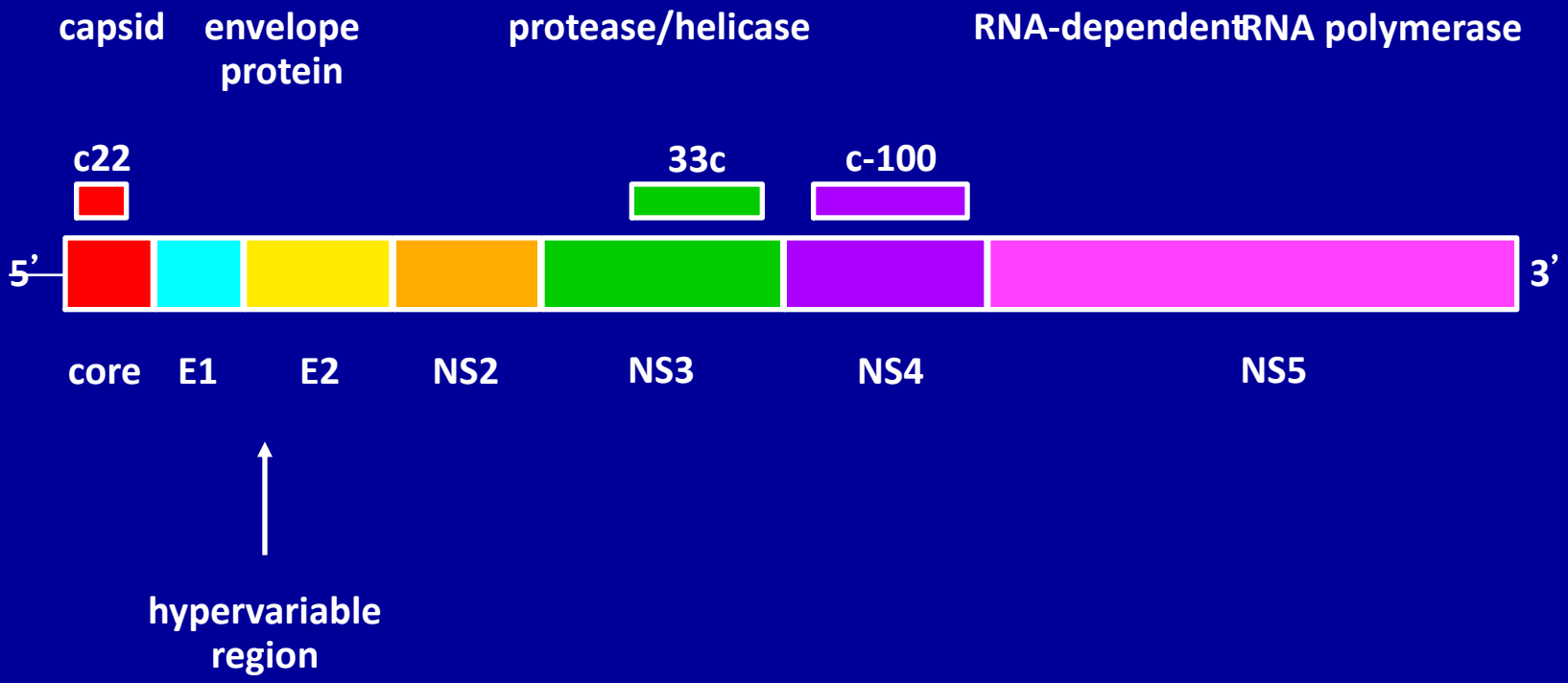
Diagnosis

- A battery of serological tests are used for the diagnosis of acute and chronic hepatitis B infection.
- **HBsAg** - used as a general marker of infection.
- **HBsAb** - used to document recovery and/or immunity to HBV infection.
- **anti-HBc IgM** - marker of acute infection.
- **anti-HBcIgG** - past or chronic infection.
- **HBeAg** - indicates active replication of virus and therefore infectiveness.
- **Anti-Hbe** - virus no longer replicating. However, the patient can still be positive for HBsAg which is made by integrated HBV.
- **HBV-DNA** - indicates active replication of virus, more accurate than HBeAg especially in cases of escape mutants. Used mainly for monitoring response to therapy.

Prevention

- **Vaccination** - highly effective recombinant vaccines are now available. Vaccine can be given to those who are at increased risk of HBV infection such as health care workers. It is also given routinely to neonates as universal vaccination in many countries.
- **Hepatitis B Immunoglobulin** - HBIG may be used to protect persons who are exposed to hepatitis B. It is particular efficacious within 48 hours of the incident. It may also be given to neonates who are at increased risk of contracting hepatitis B i.e. whose mothers are HBsAg and HBeAg positive.
- **Other measures** - screening of blood donors, blood and body fluid precautions.

Hepatitis C Virus



Hepatitis C - Clinical Features

Incubation period:	Average 6-7 wks Range 2-26 wks
Clinical illness (jaundice):	30-40% (20-30%)
Chronic hepatitis:	70%
Persistent infection:	85-100%
Immunity:	No protective antibody response identified

Chronic Hepatitis C Infection

- The spectrum of chronic hepatitis C infection is essentially the same as chronic hepatitis B infection.
- All the manifestations of chronic hepatitis B infection may be seen, albeit with a lower frequency i.e. chronic persistent hepatitis, chronic active hepatitis, cirrhosis, and hepatocellular carcinoma.

Risk Factors Associated with Transmission of HCV

- Transfusion or transplant from infected donor
- Injecting drug use
- Hemodialysis (yrs on treatment)
- Accidental injuries with needles/sharps
- Sexual/household exposure to anti-HCV-positive contact
- Multiple sex partners
- Birth to HCV-infected mother

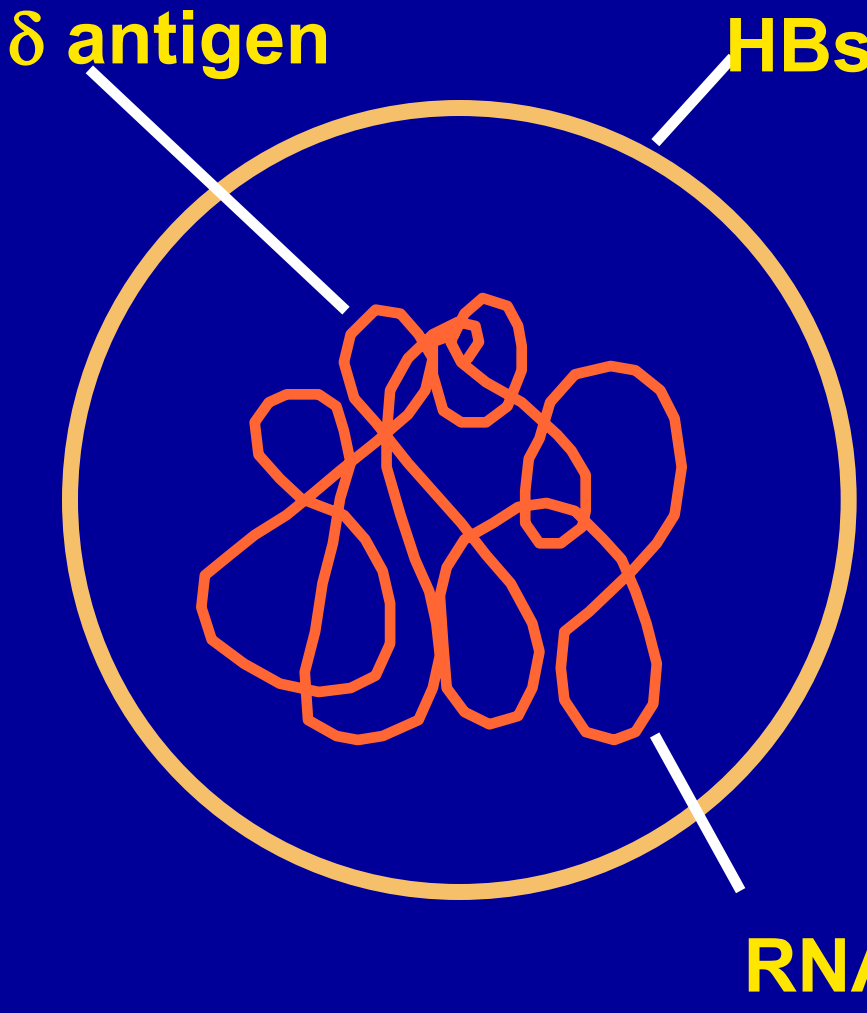
Laboratory Diagnosis

- **HCV antibody** - generally used to diagnose hepatitis C infection. Not useful in the acute phase as it takes at least 4 weeks after infection before antibody appears.
- **HCV-RNA** - various techniques are available e.g. PCR and branched DNA. May be used to diagnose HCV infection in the acute phase. However, its main use is in monitoring the response to antiviral therapy.
- **HCV-antigen** - an EIA for HCV antigen is available. It is used in the same capacity as HCV-RNA tests but is much easier to carry out.

Prevention of Hepatitis C

- Screening of blood, organ, tissue donors
- High-risk behavior modification
- Blood and body fluid precautions

Hepatitis D (Delta) Virus



Hepatitis D - Clinical Features

- Coinfection
  - severe acute disease.
  - low risk of chronic infection.
- Superinfection
  - usually develop chronic HDV infection.
  - high risk of severe chronic liver disease.
  - may present as an acute hepatitis.

Hepatitis D Virus Modes of Transmission

- Percutanous exposures
  - injecting drug use
- Permucosal exposures
  - sex contact

Hepatitis E Virus

Hepatitis E - Clinical Features

- Incubation period: Average 40 days
Range 15-60 days
- Case-fatality rate: Overall, 1%-3%
Pregnant women, 15%-25%
- Illness severity: Increased with age
- Chronic sequelae: None identified