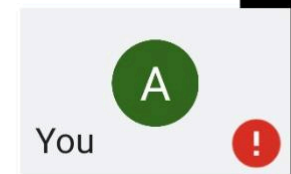


HEPATOSPLENOMEGALY

AHMED LAVING (PAEDIATRIC GASTROENTEROLOGIST)
JOY ODHIAMBO (PAEDIATRIC RESIDENT)



11:03 AM

Hepatosplenomegaly

OUTLINE

1

Introduction

2

Causes

3

History

4

Physical Examination

5

Investigations and Treatment

6

Summary

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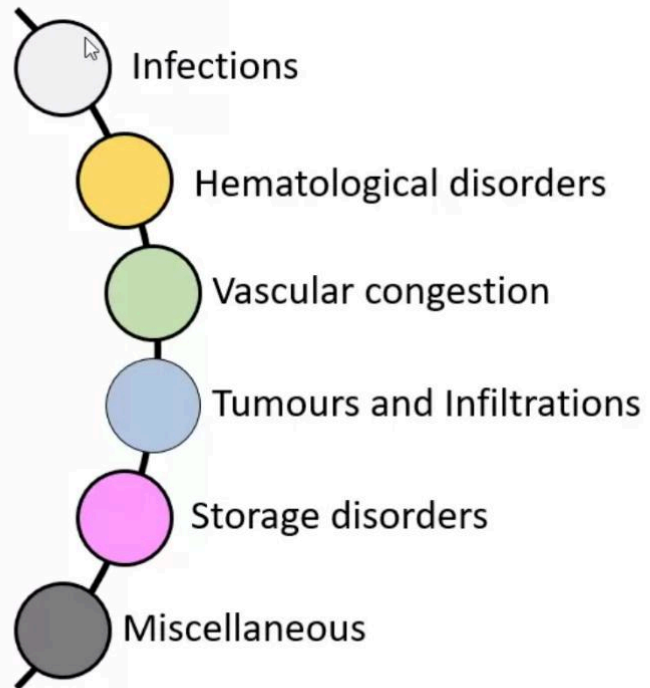
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Hepatosplenomegaly

CAUSES



You  

CAUSES

Infections

- Protozoal - Malaria, Leishmaniasis, Toxoplasmosis
- Bacterial - Typhoid, Sepsis
- Spirochaetal – Leptospirosis, Congenital Syphilis
- Viral –EBV, CMV

Hematological disorders

- Iron-deficiency anaemia
- Haemolytic disorders -
 - ✓ *Thalassaemia*
 - ✓ *Hereditary spherocytosis*
 - ✓ *Sickle cell anaemia*

Vascular congestion

- Congestive cardiac failure
- Constrictive pericarditis
- Hepatic vein obstruction
- Cirrhosis

Tumours and Infiltrations

- Leukaemia – ALL
- Lymphomas — HL and NH lymphoma
- Metastatic disease - Neuroblastoma
- Histiocytosis

Storage disorders

- Lipid storage diseases - (*Gaucher disease, Niemann-Pick disease*)
- Mucopolysaccharoidoses (*Hurler's syndrome, Hunter's syndrome*)
- Glycogen storage disease - Type IV
- Amyloidosis

Miscellaneous causes

- Serum sickness
- Connective tissue disorders-SLE, JF ^
- Sarcoidosis



You



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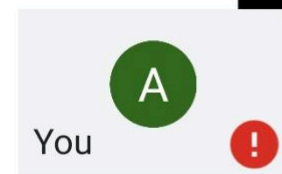


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Hepatosplenomegaly

HISTORY

- Age at onset
- Sex
- Fever, jaundice
- Acute illness, dyspnea, fatigue, diarrhea, vomiting
- Signs of malignancy- proptosis, subcutaneous nodules
- Travel history – endemic diseases
- Developmental milestones
- Nutrition history
- Medical history: umbilical catheter, weight loss, failure to thrive, bleeding, bruising, pruritis, pallor, heart disease, rashes, joint pain.
- Family history: cholecystectomy, gallstones, anaemia, liver disease, maternal HBV, HCV infection



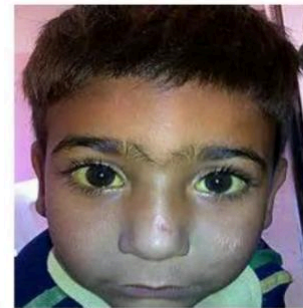


CLINICAL EXAMINATION

General



Pallor - Malaria, kala-azar, sickle cell anaemia, thalassaemia, leukemia, lymphoma



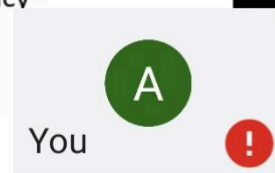
Jaundice - Liver disease / haemolytic anaemia



Petechiae, purpura, ecchymosis, lymphadenopathy etc.
- Leukaemia



Koilonychia, platynychia - Iron deficiency





CLINICAL EXAMINATION

Abdominal

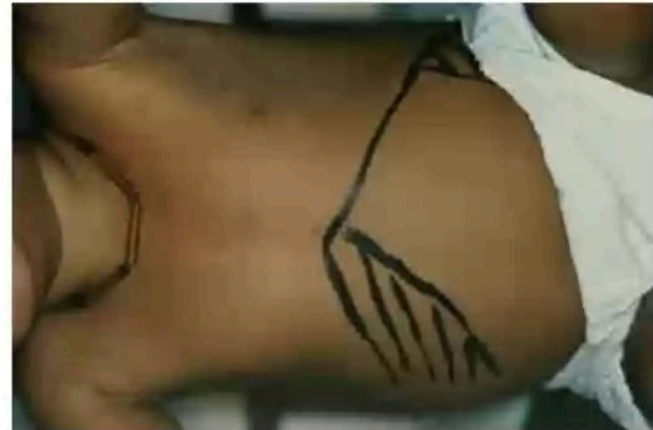
Tender hepatomegaly- Viral hepatitis, CCF, liver abscess, enteric fever

☐ **Firm consistency liver with sharp edge** - Cirrhosis, constrictive pericarditis

☐ **Just palpable soft spleen** - Enteric fever, infective endocarditis, etc.

☐ **Ascites** - Suggests cirrhosis with portal hypertension, malignancy, TB

☐ **CVS - Raised JVP** - CCF, constrictive pericarditis





CLINICAL EXAMINATION

Abdominal

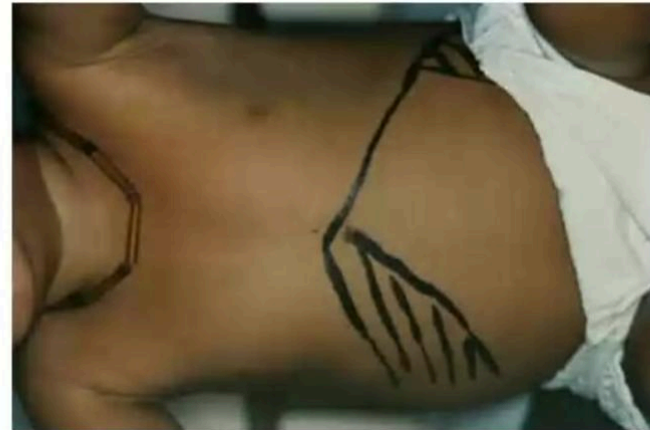
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INVESTIGATIONS

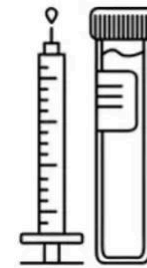
Complete haemogram - Infections, anaemia, thrombocytopenia

Peripheral smear -

- Leukaemia (Blast cells)
- Thalassaemia (hypochromia, nucleated RBC's, target cells)
- Sickle cell anaemia (sickle cells on PBF)
- Parasitic diseases (Eosinophilia)

ESR - Elevated in inflammatory diseases

Reticulocyte count - High in haemolytic anaemia



Liver Function Test

- Serum proteins** - Low in kwashiorkor
- SGOT/SGPT** - Raised in hepatitis & hepatic necrosis
- Alkaline phosphatase** - Elevated in hepatobiliary obstruction & liver abscess
- Bilirubin (total, direct)** - Haemolytic anaemias

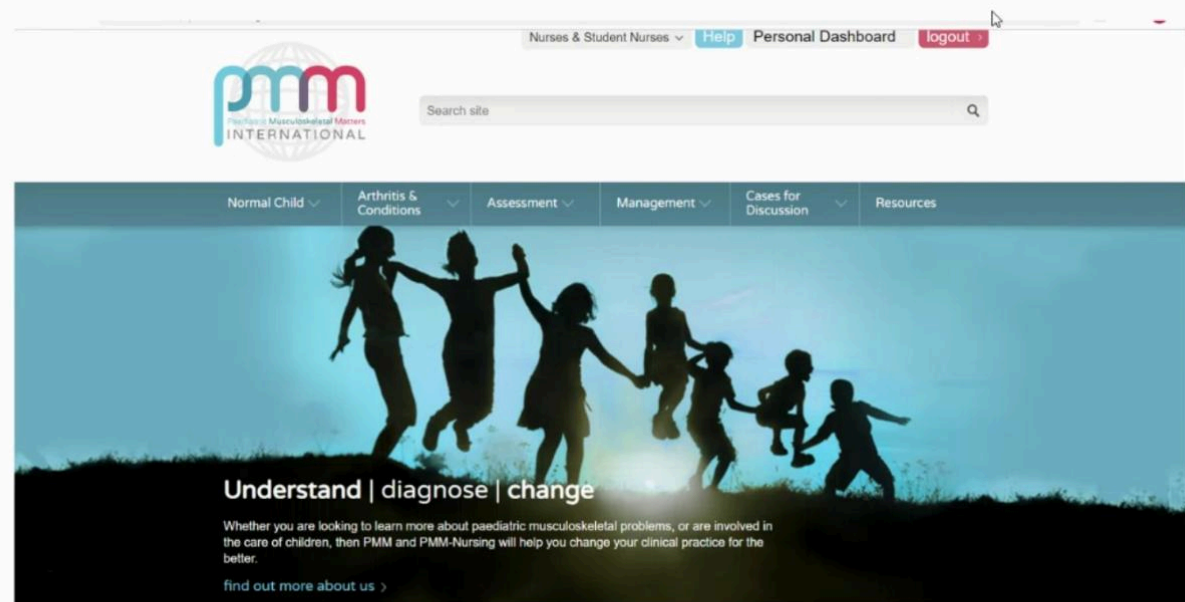
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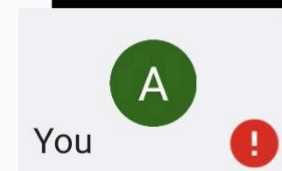


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pGALS:<http://www.pmmonline.org/video.aspx?id=1307>



Other: Gait assessment, Stanford University.
<https://www.youtube.com/watch?v=FFki8FtaBvw>



INVESTIGATIONS

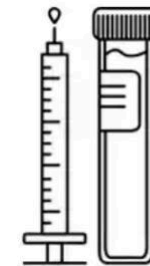
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You



MISCELLANEOUS TESTS



Raised alpha feto protein- Hepatoblastoma

Hbs Ag - Hepatitis B

High prothrombin time – Liver synthetic dysfunction

High sweat chloride - Cystic fibrosis

Wilson's disease - Low ceruloplasmin

Urine and stool examination –

Abdominal U/S - Cirrhosis with portal hypertension, Ascites, Tumors & cysts

Liver biopsy- Pathological diagnosis

Chest X-ray - ECG, echocardiography if cardiac cause suspected

Haemolytic profile in suspected haemolytic anaemia

Blood culture, Widal, Mantoux test - as required



You



TREATMENT

Infections

- Consider ANTIVIRAL for chronic hepatitis B
- Specific antivirals for hepatitis C

Metabolic disease

- Metabolism consultation
- Often requires specific restricted formulas

Cholestasis

- Ursodeoxycholic acid
- Supplemental **fat soluble vitamins** A, D, E, K

Therapy is directed at treatment of underlying disease

Immune suppression for autoimmune hepatitis

Chemotherapy – Histiocytosis, leukemia, lymphoma

Surgical treatment

Kasai portoenterostomy for biliary atresia has better outcome if done before 60 days of age.

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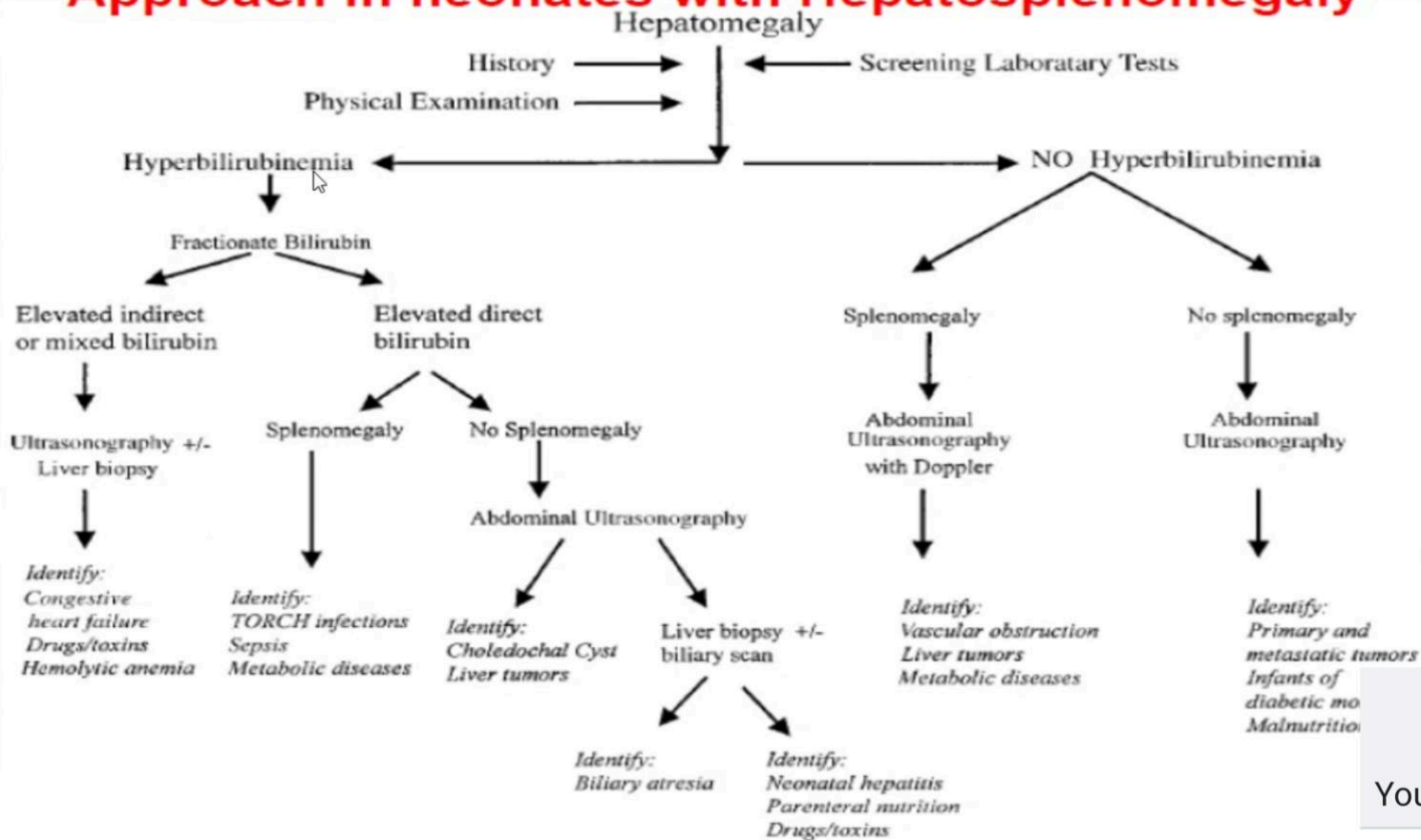


SPLENECTOMY



- If packed cells requirement is more than 250ml/kg/yr (thalassemia)
- Uncontrolled bleeding or not responding to steroid or IVIG (ITP)
- If splenectomy is performed, immunize at least 10 days prior
 - Pneumococci
 - Haemophilus influenzae
 - Meningococcal vaccine
 - Postsurgical penicillin prophylaxis required

Approach in neonates with Hepatosplenomegaly



You

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● REC

