Rule of Five – Liver Disorders

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Introduction

Liver disorders are very common in our day today Practice; if neglected or overlooked would end in fatal liver cell failure or Hepatocellular Carcinoma. How to recognize liver discords early and prevent complications? I have narrated and enlightened few clinical and lab fundamentals with easy mnemonics for general physicians and M.D. P.G.s to understand clearly and remember all facts easily. The word LIVER contains five letters, so the mnemonic is also "Rule Fives of Liver disorders." For each category,five features are mentioned in a simple way.

Important History

1. H/o: Distension of abdomen
2. H/o: Jaundice present, past, contact
3. H/o: Blood transfusion, Exposure to unsterilized needles
4. H/o: Alcohol any Hepatotoxic drugs
5. H/o: Upper G.I. bleed

Examination plan

1. Overview (General Examination)
2. Face Examination
3. Hands
4. Skin Examination
5. Abdomen Examination

Overview

1. Foetor Hepaticus
2. Drowsiness
3. Fever
4. Paedal oedema
5. Gynaecomastia

Face Examination

1. EYE - Anemia
2. EYE -Jaundice
3. EYE -Bitot's spot
4. EYE -K.F. ring
5. Parotid Glands enlargement

Hand examination

1. Leukonychia(or Leuconychia),
2. Digital clubbing
3. Palmar erythema
4. Dupuytren's contracture
5. Flapping tremor (Asterixis)

Skin Examination

1. Spider Naevi
2. Ecchymosis, Purpura
3. Pruritus marks
4. Body Hair Distribution
5. Tattoo marks

Abdomen Examination

1. Uniform distension
2. Everted & transverse umbilicus
3. Engorged cutaneous veins
4. Fluid thrill & shifting dullness
5. Splenomegaly

Important complications

1. Hepatic Encephalopathy / H.C. Failure
2. Portocaval Shunts
3. Upper G.I. bleed
4. Spontaneous Bacterial Peritonitis
5. Heptocellular Carcinoma

Sites of portocaval shunts

1. Caput medusa - Para umbilical

2. The inferior end of the esophagus - Esophageal Varices
3. The superior part of the rectum – Rectal Varices
4. Bare area of liver
5. Retroperitoneal - Splenorenal shunt

Salient Investigations for Liver Disorders

1. U/S Abd, (Fibroelastogram)
2. Liver Function Tests
3. Viral Markers
4. Upper Gi Endoscopy
5. Ascitic Fluid Analysis

Hepatic Encephalopathy Precipitants

1. High protein diet
2. Upper G.L. bleed
3. Overzealous diuretics
4. The rapid large amount of ascetic fluid tapping
5. Heavy sedation

Management Considerations

1. Salt restriction
2. Beta-Blocker
3. Lactulose Liquid
4. Neomycin Cap
5. Inj. Vit. K

Brief Explanation

Uniform Distension of the abdomen may indicate developing ascites. H/o: Jaundice may be due to viral hepatitis or alcohol abuse. H/o: blood transfusion &Exposure to unsterilized needles may be a clue to hepatitis virus B, C, or D portal of entry.

H/o: Alcohol is an obvious fact for Alcoholic Cirrhosis. And from the H/o: Upper G.I. bleed, we can suspect oesophageal varices & Portal Hypertension.

General Examination

Drowsiness may be evidence for impending prehepatic Coma;

Foetor Hepaticus is rare but reliable evidence of H.C. failure. Fever in liver disorders may be present without infection because of the "non-detoxifying" of gut pyrogens. Bitot's spot is indicative of Vit. A def which is a feature of chronic liver cell failure. of course, the K.F. ring (Kayser Fleischer Ring) indicates Wilsons' disease. Paedal oedema means hypoalbuminemia & Gynecomastia is a feature of chronic hepatic failure. In-Hand examination, all the findings are stigmata of chronic liver disease. Spider Naevi is pathognomonic of impending hepatic failure. Tattoo marks may tell the possible entry of hepatitis virus B, C or D. Pruritus marks are a feature of biliary cirrhosis or G.B. obstruction. Cutaneous bleeding can occur in chronic hepatic insufficiency. Axillary & pubic hair loss & chest hair loss in the male are characteristic body hair distribution in chronic liver disorder. Abdomen Examination features are definite evidence of portal hypertension,

Salient Investigations would clinch the diagnosis. The Hepatic Encephalopathy Precipitants recognition factors are helpful to prevent hepatic Coma and are mandatory for treatment outcomes.

Five important Sites of Portocaval Shunts & Complications are necessary for informing relatives of the prognosis. Five investigations are enough to assess the etiology and present status. 5 Important Hepatic Encephalopathy Precipitants are easily remembered in this way. The management protocol is outlined in the last 'Fives.'

References

1. Harrison's Principles of Internal Medicine, 20e Part 10; section 3; chapters 332 to 337
2. Sherlock's Diseases of the Liver and Biliary System, 13th Edition Chapters 8 & 9.