

ALCOHOLIC LIVER DISEASE

4th yr MBCHB 2021

Alcoholic liver disease

Can be placed into 3 categories:-

- 1) Fatty liver
- 2) Alcoholic hepatitis
- 3) Cirrhosis

Alcoholic liver disease

Fatty Liver

- The metabolism of alcohol invariably produce fat in the liver- mainly zone 3
- With large amounts of alcohol liver become swollen with fat. i.e STEATOSIS
- No liver cell damage
- Improves with alcohol stoppage

Alcoholic hepatitis

- ❖ There is fatty change
- ❖ There is infiltration by PMN leucocyte
- ❖ & Hepatic necrosis mainly in zone 3
- ❖ Dense cytopathic inclusions **called Mallory bodies** are sometimes seen in hepatocyte. Mallory bodies are suggestive of alcohol damage. However, they can be found in Wilson's disease & PBC
- ❖ Giant mitochondria are also a feature

Alcoholic Cirrhosis

- ❖ Classically micronodular

Mixed pattern may also be seen accompanying fatty change & background alcoholic hepatitis

Alcoholic liver disease

- ❖ Males are more likely to develop alcoholic liver disease than females as Males consume more alcohol > females
- ❖ However, females are more susceptible to alcoholic hepatotoxicity & have x2 the relative risk of ALD & cirrhosis compared to men
- ❖ ↑BMI is also a risk factor in ALD

Alcohol consumption & alcoholic liver disease

- ❖ Fatty liver is a universal finding among heavy drinkers
& up to 40% in moderate consumption -----10-80mg/day
- ❖ In males alcoholic intake > 40gm/day is necessary to produce pathological changes of alcoholic hepatitis & consumption of > 80gm /day is associated with an ↑ in severity of alcoholic hepatitis & > 160gm carries a very high risk
- ❖ Half of above figures apply in females
- ❖ There is a clear dose dependent relation between alcoholic intake & the incidence of alcoholic cirrhosis
- ❖ A daily intake of > 60gms of alcohol in males & 20gm in females ↑ the risk of cirrhosis

Alcoholic liver disease

Alcohol metabolism in the liver
Is through 2 main pathways:-

- ❖ Alcohol dehydrogenase (ADH)
- ❖ Cytochrome P450 (CYP) 2E1

ADH

Ethanol → acetaldehyde. → lead liver cell damage

Only 10-20% of people who drink heavily develop liver cirrhosis:

- ? Genetic predisposition
- ? Role of immunological factors

Alcoholic liver disease : Evaluation

- ❖ TBC. ↑ MCV

- ❖ Liver biochemistry

 - Transaminases ↑ : AST > ALT

 - GGT ↑↑. ALP ↑

 - ↓ Albumin in liver cirrhosis

- ❖ Imaging: Show fatty change

 - Abdominal ultrasound: Hyperechoic liver +/- hepatomegaly

 - CT/MRI

- ❖ Elastography: to estimate degree of fibrosis

- ❖ Liver biopsy

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Alcoholic liver disease: Treatment

- ❖ Abstain from alcohol: Handle withdrawal Symptoms

- ❖ Nutritional support

 - Take daily regular diet with:-

 - 1- 1.5 gm protein

 - 30-40Kcal/Kg

- ❖ Vitamins

- ❖ In severe acute alcoholic hepatitis : can reduce inflammation by :-

 - Corticosteroid

 - Pentoxifylline

- ❖ Liver transplant