

CASES FOR DISCUSSION

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HCV

CASE-1

- A 34 years old apparently healthy lady who came to us after being told to have HCV infection on medical checkup done as part of a visa approval process to travel to the one of the middle east countries.
- P/E – showed normal findings
- CBC, liver enzymes , LFT and abdominal u/s was also found to be normal

CASE 2

- A 50 yrs old man came to our clinic with a complaint of fatigue since 2 years , progressive abdominal distension of 3 months duration with associated poor appetite and un-qualified but significant wt loss
- P/e- chronically sick , with stable V/S , icteric sclerae , muscle wasting and +v signs of fluid collection in the peritoneum.

- Lab data –WBC- 4000 Hgb -9.6 , MCV- 79 plt- 92,000
RFT and Elec =WNL ,
AST- 210, ALT – 160 , ALP-150 , INR-1.7 , bil-T-2.9
D-1.6
- Anti HCV Ab -+ve , HBsAg and HIV serology were –ve.
- U/S revealed – NI sized liver with with blunted edge , irregular surface and heterogeneous echotexture with ascites and splenomegaly .

CASE 3

- A 28 yrs old lady who just started ANC followup for 1st TM pregnancy was told to have HCV on workup and her obstetrician sent her to us for possible evaluation of the viral hepatitis
- p/e – was unremarkable
- Lab workup including CBC , LFT , Liver enzymes , HBsAg , and HIV screening were NL.
- And u/s showed normal abdominal scan with no signs of cirrhosis

Who to treat?

Recommendations for When and in Whom to Initiate Treatment

- Treatment is recommended for all patients with chronic HCV infection, except those with short life expectancies that cannot be remediated by treating HCV, by transplantation, or by other directed therapy. Patients with short life expectancies owing to liver disease should be managed in consultation with an expert.

Rating: Class I, Level A

Prioritization for ...

- Evidences for cirrhosis
- Showing worsening of liver dis.
- Severe extra hepatic manifestations
- Hiv/Hbv co infection
- Other causes of liver disease
- High risk for transmission groups

- 1 . Incidental HCV ab positive pt – what is the way forward:

- confirm Dx

- prioritize based on :

 - assessment of degree of fibrosis (how ?)

 - presence of other co morbidities (HIV /HBV)

 - other causes of liver disease

 - extra hepatic manifestations

 - worsening liver disease

- **Assesment of liver fibrosis**

- liver biopsy** (not much practical)

- non invasive** ways like

- APRI** = (AST elevation/platelet count) x 100

- A meta-analysis of 40 studies provided the following estimates :

- An APRI threshold of **0.7** had an estimated sensitivity and specificity of **77 and 72 percent** for **significant fibrosis**.

- An APRI threshold of **1.0** had an estimated sensitivity and specificity of **76 and 72 percent** for **cirrhosis**.

-**FIB-4** -Formula :

$$-(\text{Age} \times \text{AST}) / (\text{Platelets} \times (\text{sqr} (\text{ALT})))$$

-For HCV with or without HIV :

-Fib4 score < 1.45 = F0-F1

-Fib4 score > 3.25 = F3-F4

	APRI (low cut-off)	APRI (high cut-off)	FIB4 (low cut-off)	FIB4 (high cut-off)	Transient elastography (Fibroscan)
Significant fibrosis (METAVIR \geq F2)	0.5	1.5	1.45	3.25	7–8.5 kPa
Cirrhosis (METAVIR F4)	1.0	2.0	–	–	11–14 kPa

-**FIBROSCAN** (U/S transient elastography)

-In two meta-analyses, the pooled estimates for the diagnosis of **cirrhosis** with TE were excellent, with **sensitivity and specificity values approaching 90%**.

-Reported diagnostic threshold (or cutoff) values for cirrhosis have ranged between **11 and 17 kPa** in studies of patients with chronic hepatitis C.

Existing recommendation from 2014

In resource-limited settings, it is suggested that aminotransferase/platelet ratio index (APRI) or FIB-4 be used for the assessment of hepatic fibrosis rather than other non-invasive tests that require more resources such as elastography or FibroTest.

Conditional recommendation, low quality of evidence

Note: This recommendation was formulated assuming that liver biopsy was not a feasible option. FibroScan®, which is more accurate than APRI and FIB-4, may be preferable in settings where the equipment is available and the cost of the test is not a barrier to testing.

- 2.pt with cirrhosis who turns out to have hcv infection-

- confirm the Dx (quantitative HCV RNA)
 - already in the priority group so proceed to genotype testing and pre-treatment evaluation
 - initiate therapy

* The APRI – $(200/40)/96 \times 100 = 5.2$

- 3.pregnant lady hcv +ve during screening

- concern is **MTCT** and health of the mother
 - assess the mother as for case 1
 - low vertical transmission rate of **3–5%**
 - Factors known to increase the risk of perinatal transmission- **HIV coinfection** and **higher maternal viral loads**

- No active preventive strategy (vaccines or drug therapy)

- Vaginal delivery vs c/s controversial

(recent evidences from Italy and china showing benefit of c/s in high risk groups)

- breast feeding is safe

CHALLENGES

- Screening – most pts come with advanced liver disease
- Cost of investigations
- Cost and availability of medications
- Lack of knowledge

What is available ..

- SOF/LDV
- SOF
- RBV

HBV

CASE 1

- 40 years old male from Gondar
- Found to be +ve for HBsAg on routine check up
- p/e – unremarkable except for being marginally overweight and having a BP of 140/90
- Lab data including LFT , CBC , Liver enzymes , RFT, HCV Ab are all NL.
- U/S – Normal findings

CASE 2

- A 38 years old male pt from Nazret who presented to our ER 3 days back with 2 days history of hematemesis and melena
- Further enquiry revealed that pt has been having long standing fatigue , and progressive abdominal distension with associated poor appetite and bilateral leg swelling since 5 months .
- He has had a similar episode of UGI bleeding 3 months back – he received blood transfusion and was told to have a liver disease and was put on diuretics at that time .

- On presentation – pt was hypotensive with a BP of 80/ 50 PR= 120 , temp- 36.7
 - severe pallor , icteric
 - ascites , visible abdominal wall collaterals
 - bilateral pedal edema
 - conscious and oriented

- Lab data – hgb =4.6 plt 68000 WBC= 6000
 - Cr-1.4, BUN=80
 - ALB= 2.5 , INR- 1.5
 - AST= 134 and ALT -62
 - Bil-T-3.4 D- 2.1

Bedside U/S – Cirrhotic liver with splenomegaly and massive ascites

- Transfusion –PRBC and FFP
- Prophylactic ABC
- Endoscopy – actively bleeding grade 3 esophageal varices + severe PHG
- EBL done

CASE 3

- A 34 yrs old gravida 3 woman in her 1 st TM who is sent to you from ANC clinic for evaluation of a + HBsAg test .
- p/e – normal findings
- Lab data – CBC , RFT , Elec. = NI
AST and ALT – NI
ALP – slightly raise
bil, alb , INR and abd Abd u/s – Normal .

INDICATION FOR TREATMENT

- Decision to treat HBV is based on
 - Elevated ALT
 - HBV DNA (viral load)
 - Severity of liver disease(degree of fibrosis)
 - HBeAg status
 - Age
 - Comorbidities

Who to treat:

As a priority, all adults, adolescents and children with CHB and clinical evidence of compensated or decompensated cirrhosis (or cirrhosis based on APRI score >2 in adults) should be treated, regardless of ALT levels, HBeAg status or HBV DNA levels. (*Strong recommendation, moderate quality of evidence*)

Who to treat

Treatment is recommended for adults with CHB who do not have clinical evidence of cirrhosis (or based on APRI score ≤ 2 in adults), but are aged more than 30 years (in particular), **and** have persistently abnormal ALT levels **and** evidence of high-level HBV replication (HBV DNA $>20\,000$ IU/mL), regardless of HBeAg status. (*Strong recommendation, moderate quality of evidence*)

- › *Where HBV DNA testing is not available:* Treatment may be considered based on persistently abnormal ALT levels alone, regardless of HBeAg status. (*Conditional recommendation, low quality of evidence*)

Existing recommendation for HBV/HIV-coinfected persons¹:

- In HBV/HIV-coinfected individuals, ART should be initiated in all those with evidence of severe chronic liver disease^b, regardless of CD4 count; and in all those with a CD4 count ≤ 500 cells/mm³, regardless of stage of liver disease. (*Strong recommendation, low quality of evidence*)

- 1. A pt found to have +Ve HBsAg with normal liver enzymes , LFT and imaging studies .
 - 1st confirm chronicity of infection
 - follow up HBsAg after 6 months or antiHBcAb
 - assess degree of fibrosis (Bx Vs noninvasive measures)
 - can follow pt with LFT and clinically Q 6-12 mo
 - but if there is evidence of significant fibrosis or persistent elevation of transaminases , determine viral load and consider treatment

Q- How far should we go in investigating such patients ?

- 2. pt with cirrhosis and +Ve HBsAg test
 - indication for therapy so do pretraetment evaluation and start treatment
 - treat complications
 - Surveillance for HCC

- 3. pregnant woman found to be HBsAg +Ve on screening
 - Do HBV viral load and HBeAg
 - antiviral therapy if viral load is > 1 mill copies and HBeAg +V or if the mother has an indication for therapy
 - HBV vaccine and HBIG for the new born baby (esp if HBeAg +ve)
 - * -in resource limited setting and in those with HBeAg -v , HBV vaccine may suffice .

THANK YOU