DECISION-MAKING IN HCV

HCV

Hepatitis C testing

Could it be hepatitis C?

Patient request

Abnormal liver function test (LFT)

Doctor concern

Presence of risk factors
- Injecting drug use
- Sharing of snorting equipment
- Birth in high prevalence country
- Blood transfusions and blood products before 1990 in Australia
- Unsterile tattooing and body piercing
- Unsterile medical and dental procedures and blood transfusions in high prevalence countries
- Time in prison
- Needlestick injury
- Mother to child transmission is around 5%
- Household transmission is very rare
- Sexual transmission is rare but can occur in certain populations, such as men who have sex with men (MSM) or those who are Human Immunodeficiency Virus (HIV) positive.

Jaundice or acute hepatitis

Order:
Hep C antibody (Ab)
LFT

If possible acute hepatitis, also order HCV RNA

Review results

Hep C Ab -ve
LFT normal
(means hepatitis C unlikely, HCV RNA not needed)

Hep C Ab -ve
LFT abnormal
or possible acute hepatitis C

Hep C Ab +ve

Check Hep C RNA

Hep C Ab -ve
HCV RNA -ve
means hepatitis C unlikely

Hep C Ab -ve
HCV RNA +ve
means acute hep C

Hep C Ab +ve
plus repeated HCV RNA +ve
means chronic hepatitis C
(chronic if > 6 months)

Hep C Ab +ve
plus repeated HCV RNA –ve
means cleared hepatitis C

Follow up and referral

Repeat
Hep C Ab, LFT
if recent (possible window period)
or ongoing risk

Option 1
Further assessment and treatment in primary care – see next page

Option 2
Refer for assessment and treatment

Repeat
HCV RNA, LFT
if on-going risk

Gain informed consent in a culturally appropriate manner
Discuss:
- Reason for test
- Risk factors
- Meaning of a positive antibody test
- Availability of treatment if HCV PCR positive
- Mechanism for communicating test results

Convey test result
If positive, results should always be provided in person and explain:
- Natural history
- Modes of transmission and risk reduction
- Availability of treatment
- Need for ongoing, potentially lifelong monitoring
- Life style factors e.g. alcohol minimisation, diet
- Availability of peer support services, information and support services
- Refer to Hepatitis Australia National Infoline 1800 437 222

* Check Medicare schedule rebates for HCV RNA testing

For further details on testing, see the National HCV Testing Policy, available at http://testingportal.ashm.org.au/hcv

DECISION-MAKING IN HCV

HCV

Hepatitis C assessment and treatment

Primary Care Provider		Specialist review if:
Testing and Diagnosis		
Confirm chronic HCV infection	• Anti-HCV +ve indicates exposure to HCV virus • HCV RNA +ve confirms current infection	
Check HCV genotype, viral load and baseline screening	• HCV genotype determines treatment choice and is a PBS requirement • Quantitative HCV RNA test- if low viral load, consider shorter duration of therapy if genotype 1 • Full Blood Evaluation (FBE) • Urea, electrolytes, creatinine (UEC) • Liver function test (LFT) and INR	
Pre-treatment Assessment		
Assess liver fibrosis: could they have cirrhosis?	• Cirrhotic status determines treatment regimen and length (and is a PBS requirement) • Detect signs of chronic liver disease: spider naevi, palmar erythema, jaundice, asterixis, hepatomegaly, splenomegaly, ascites, peripheral oedema • Undertake non-invasive assessment of fibrosis: o FibroScan assessment if available (>12.5 kPa consistent with cirrhosis) o Serum bio markers such as APRI (if score >1.0, significant risk of cirrhosis), FIB-4, HepaScore • A low albumin and/or a low platelet count suggests cirrhosis • Liver ultrasound if cirrhosis suspected to detect portal hypertension (splenomegaly, dilated portal vein, ascites, varices) and HCC screening	Cirrhosis is present
Detect other causes of liver disease	• Check for viral coinfection: o HIV Ab o Hepatitis A – check hep A IgG; vaccinate if -ve o Hepatitis B – check HBsAg, anti-HBc and anti-HBs; vaccinate if all –ve • Heavy alcohol intake • Fatty liver disease • Further investigations (e.g. iron studies) if indicated or abnormal LFT post treatment	Coinfected with HIV, HBV
Detect other major co-morbidities	• Renal disease • Mental health • Drug and alcohol use • Heart disease- may not be able to use ribavirin (causes anaemia); perform ECG if ribavirin prescribed and patient has risk factors for IHD	Renal impairment (eGFR <50)
Review previous HCV treatment	• Choice and length of treatment is influenced by genotype and prior HCV treatment experience / response	Treatment failure of DAAs
Consider contraception, pregnancy	• DAAs are not recommended for use in pregnant or lactating women • Ribavirin is a Category X drug. Dual forms of contraception are required during treatment and for 6 months post-treatment if ribavirin is prescribed	
Assess adherence	• Determine likelihood of adherence with medication, readiness to have treatment and the need for adherence support	

Primary Care Provider		Specialist review if:
Treatment, Monitoring and Follow-up		
Review drug interactions	• Check for potential drug interactions with current medications including over the counter drugs at www.hep-druginteractions.org. DAA selection and dose may need to be modified or current medication may need to be reviewed prior to treatment	Complex drug interactions
Select treatment regimen[2]	• Refer to the General Statement for Drugs for the Treatment of Hepatitis C[1] and the Australian recommendations for the management of hepatitis C virus infection: a consensus statement[2]	
[Consult with a specialist]	• If not experienced in hepatitis C treatment, a Remote Consultation Request for Initiation of Hepatitis C Treatment[2,3] form may be completed or consult with a specialist via phone or email	[Specialist approval is required]
Treat and monitor	• Call the PBS Authority Script Line for approval to prescribe • Monitoring should be individualised, see Table 1 • Side effects of DAA therapy are generally mild	Major adverse events
Post treatment follow-up (Table 1)	• SVR (cured), normal LFT, no cirrhosis – no further follow-up needed • SVR (cured) but persistently elevated LFTs – require evaluation for other liver diseases and specialist referral • No SVR (not cured, HCV detectable 12 weeks post-treatment) need specialist referral • Cirrhosis – lifelong monitoring and specialist care o 6-monthly abdominal ultrasound (hepatocellular carcinoma screening) o Endoscopic surveillance for oesophageal varices o Osteoporosis; 2-yearly DEXA scans and monitor serum vitamin D	Treatment failure of DAAs Persistently abnormal LFTs

PBS: Pharmaceutical Benefits Scheme; INR: International Normalised Ratio; IHD: Ischaemic Heart Disease; DAAs: Direct Acting Antivirals; APRI: AST to Platelet Ratio Index; FIB-4: Fibrosis 4; SVR12: undetectable plasma HCV RNA 12 weeks post treatment

Table 1: Monitoring on-treatment and post-treatment

Routine monitoring for a 12-week treatment regimen		
	Blood tests	HCV virology
Week 0	FBE, U&Es, LFTs	HCV RNA (quantitative)
Week 4, 8*	LFTs	
Week 12 (End of Treatment)	LFTs	
Week 12 after End of Treatment (SVR)	LFTs	HCV RNA (qualitative)

*LFTs at week 8 instead of week 4 if taking Zepatier

Note: At each visit, assess for medication adherence, treatment adverse events and drug-drug interactions. Some people will require closer monitoring[3]

APRI SCORE CALCULATOR

(Or use an online calculator at:
www.hepatitisc.uw.edu/page/clinical-calculators/apri)

$$\text{APRI} = \left[\frac{\frac{\text{AST Level (IU/L)}}{\text{AST (Upper Limit of Normal) (IU/L)}}}{\text{Platelet count } (10^9/\text{L})} \right] \times 100$$

Additional copies and electronic version available at: http://www.ashm.org.au/resources

Links to resources

www.ashm.org.au

ashm
Supporting the HIV, Viral Hepatitis and Sexual Health Workforce

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[1]www.pbs.gov.au
[2]www.hepcguidelines.org.au
[3]www.gesa.org.au

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