DECISION-MAKING IN HCV IN CANADA

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 countries
  - Blood transfusion and blood products before 1990 in Canada
  - Unsterile tattooing and body piercing
  - Unsterile medical and dental procedures and blood transfusion in high prevalence countries
  - Incarceration
  - Needlestick injury
  - Monther to child transmission is around 5%
  - Sexual transmission is rare but can occur in certain populations, such as men who have sex with men or those who are HIV postiive.
- **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 results

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
- Lifestyle factors e.g. alcohol minimization, diet
- Availability of peer support services, information and support services

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HEPATITIS C: A step-by-step guide to treating hepatitis C in primary care

Step	Primary Care Provider	Additional Information	Refer for specialist review if:
1	Confirm chronic HCV infection	• Anti-HCV +ve indicates exposure to HCV virus • HCV RNA +ve confirms current infection	
2	Check HCV genotype, viral load and baseline screening	• HCV genotype determines treatment choice • Quantitative HCV RNA test - if low viral load, may allow shorter duration of therapy if genotype 1 • Complete Blood Count (CBC) • Urea, electrolytes • Liver function test (LFT) • INR	
3	Assess liver fibrosis: could they have cirrhosis?	• Documentation of the presence or absence of cirrhosis • Cirrhotic status determines treatment regimen and length of treatment • Detect signs of chronic liver disease in physical exam: spider nevi, palmar erythema, jaundice, asterixis, hepatomegaly, splenomegaly, ascites, peripheral edema • 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
4	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
5	Detect other major co-morbidities	• Renal disease • Mental health • Drug and alcohol use • Heartburn - some antacid medications may reduce effectiveness of several commonly used DAAs • Heart disease- may not be able to use ribavirin (causes anaemia); perform ECG if ribavirin prescribed and patient has risk factors for CVD	Renal impairment (eGFR <50)
6	Review previous HCV treatment	• Choice and length of treatment is influenced by genotype and prior HCV treatment experience / response	Treatment failure of DAAs
7	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 for both men and women	
8	Assess adherence	• Determine likelihood of adherence with medication, readiness to have treatment	
9	Select treatment regimen and review drug interactions	• Refer to the Canadian Guidelines on Hepatitis Treatment 2017 • 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
10	Treat and monitor (Table 1)	• Complete a Special Authorization Request form to prescribe • Monitoring should be individualised, see Table 1 • Side effects of DAA therapy are generally mild	Major adverse events
11	Post treatment follow-up (Table 1)	• No further follow-up for HCV is required for people with no cirrhosis who are cured (SVR 12) and have normal LFTs • People who have SVR12 but persistent elevated LFTs require further evaluation for other liver diseases • People with cirrhosis require life-long monitoring: o 6-monthly abdominal ultrasound (hepatocellular carcinoma screening) o Endoscopic surveillance for esophageal varices o Osteoporosis; consider DEXA scan and vitamin D levels if available	Treatment failure of DAAs Persistently abnormal LFTs

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	CBC, LFTs	HCV RNA (quantitative)
Week 12 (End of Treatment)	LFTs	
Week 12 after End of Treatment (SVR)	LFTs	HCV RNA (qualitative)

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

Additional copies and electronic version available at: http://www.inhsueducation.org

Further resources are available at: www.ashm.org.au/resources

Links to resources

www.liver.ca
www.hepatology.ca
www.catie.ca

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