

Initial Evaluation for HCV Therapy

Hope McGratty PA-C, MPH

Conflict of Interest Disclosure Statement

None

Who are we talking about today?

- Treatment naïve
- Chronic infection

This patient seems complicated...

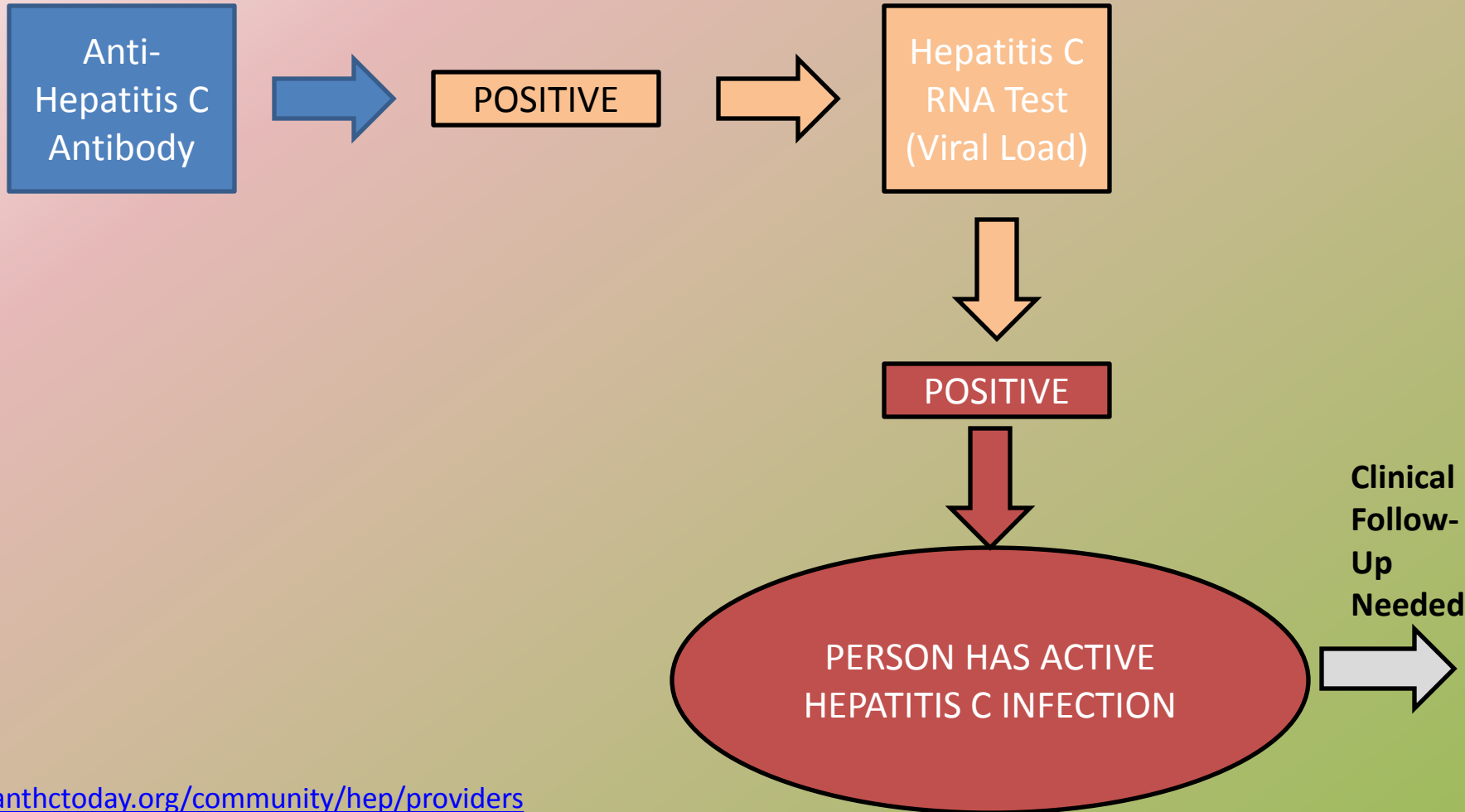
Consult

- Compensated cirrhosis
- Other contributions to liver disease
- Anyone who seems like a challenge you can handle with a little guidance

Refer to GI, hepatology or ID

- Co-infected with HIV or HBV
- HCC
- Decompensated cirrhosis
- Failed prior HCV therapy
- Dialysis
- Prior or future transplant

Hepatitis C Virus Screening and Clinical Tests



Acute vs chronic HCV

- Acute HCV: defined as presenting within 6 months of exposure
- Approximately 20%-50% will clear HCV spontaneously- 2/3 within the first 6 months of infection
- Monitoring HCV RNA (every 12 weeks) for 6 to 12 months is also recommended to determine spontaneous clearance versus persistence of HCV infection.

A case

- A 54 yo (born 1964) female presents for an annual physical exam and hopes to establish care with you
- PMH: HTN, prediabetes, obesity, GERD
- Medications: lisinopril 20 mg daily and omeprazole 20 mg daily
- Social hx: no drugs or tobacco. She enjoys alcohol (in moderation) a few times a month

A case

- PE: remarkable for central adiposity and mild peripheral edema
- Baseline labs: normal- H/H, platelets, creatinine, and TSH. Abnormal- AST 77 (0-40), ALT 82 (0-44), total cholesterol 275 (<200), and LDL 180 (<130)

What do you need to know?

- History
 - Risk factors for HCV acquisition (past and present)
 - Alcohol and illicit drug use (past and present)
 - Psychiatric history
 - Medical co-morbidities (hepatic and non-hepatic)
 - Significant co-infections (HIV and HBV)

What do you need to know?

- History continued
 - Social (stable housing, transportation, support of family/friends, baseline education regarding HCV)
 - Allergies
 - Medications, herbs, supplements, OTC (potential drug/drug interactions)
 - Birth control (not treating during pregnancy, DDI)

A few thoughts on pregnancy and HCV

- Guidelines recommend treating HCV prior to pregnancy
- Mother to child transmission is low- 5-15% with progression to chronic infection 3-5%
- Children born to mothers with HCV need antibody-based screening at or after 18 months

How healthy is the liver?

- Has the patient ever been treated for HCV?
 - Treatment naïve vs treatment experienced
- Have they had prior fibrosis staging?
 - History of a liver biopsy, Fibroscan or previous work-up? Important to document prior stage

How healthy is the liver?

- Is there evidence in their medical history of complications from liver disease?
 - Prior hospitalizations for ascites, jaundice, hepatic encephalopathy or gastrointestinal bleeding?
 - If there is evidence of decompensated cirrhosis defined as ascites, jaundice, variceal hemorrhage or hepatic encephalopathy they need a prompt referral to GI/hepatology

How healthy is the liver?

- Are there any extra-hepatic manifestations of liver disease?
 - fatigue (most common), depression, arthralgias, neuropathy, nephropathy, glomerulonephritis, lichen planus, and mixed cryoglobulinemia

Physical exam

- A complete PE at baseline is important
- Height, weight and BMI should be documented
- Look for liver related physical findings that would indicate advanced liver disease
 - Spider nevi (angioma), distended abdominal veins and Caput Medusa, Terry's Nails, palmar erythema, jaundice, gynecomastia

Spider nevi or telangiectasia



Caput Medusa



Terry's Nails



Palmar Erythema



Jaundice



Gynecomastia



What labs do you need?

- Goals: identify abnormalities directly related to HCV and liver disease
 - Thrombocytopenia, liver dysfunction, inflammation
- Establish broader baseline to monitor during treatment
 - H/H, renal function

General laboratory evaluation

- CBC, CMP, PT INR
- HCV RNA quantitative (viral load)
- HCV genotype
- HIV screen
 - 4th generation HIV antibody/p24 antigen
- HAV total antibody, HBV surface antigen, surface antibody, core antibody
 - Checking for HAV/HBV immunity and confirming HBV status

Immunizations

- All persons with HCV should be fully vaccinated for HAV and HBV
- Pneumococcal vaccination recommended for patients with cirrhosis or alcoholism
 - For more information, see handout
- Routine adult vaccines: influenza, TDaP

What else should you be aware of?

- HCV can co-exist with other forms of liver disease
 - Alcoholic hepatitis (history, AST/ALT ratio, GGT)
 - NAFLD and NASH
 - Alpha-1 Antitrypsin Deficiency
 - Hemochromatosis
 - Autoimmune hepatitis

Evaluating fibrosis

- Why is it important?
 - Primarily to identify those with advanced disease who will need HCC screening and additional long term follow up
- Terminology
 - Grade is used to describe inflammation
 - Stage is used to describe fibrosis

Metavir scoring system

STAGES (fibrosis)

- F0- no fibrosis
- F1- mild fibrosis (portal fibrosis without septa)
- F2- moderate fibrosis (portal fibrosis with few septa)
- F3- advanced fibrosis (numerous septa without cirrhosis)
- F4- cirrhosis

GRADES (inflammation)

- A0- no activity
- A1- mild activity
- A2- moderate activity
- A3- severe activity

How do we evaluate fibrosis?

- Non-invasive techniques
 - Indirect markers and direct markers of fibrosis
- Radiologic imaging
- Liver biopsy

Indirect markers of fibrosis

- APRI
 - AST and platelets
- FIB-4
 - Age, AST, ALT, and platelet count
- Both are good at excluding or confirming significant fibrosis but less valuable for those in the middle
- Additional scoring methods that are more complicated exist

Indirect markers of fibrosis

- Fibrosure (or similar depending on the lab)
 - Uses a proprietary algorithm that includes age, gender, and six biochemical markers associated with hepatic fibrosis
 - Will give grade and stage score
 - Contraindications to Fibrosure are Gilbert's disease, acute hemolysis, extrahepatic cholestasis, post-transplant, and renal insufficiency

Imaging to estimate fibrosis

- Abdominal U/S
- Transient U/S Elastography
- Magnetic Resonance Elastography

Abdominal U/S

- Advantages
 - Non-invasive, lower cost, widely available
 - Potential to identify useful factors
 - Nodularity, small volume ascites, spleen size
 - Coarseness of the parenchyma
 - Size of lymph nodes around hepatic artery
 - Patency and flow of veins and arteries
 - Hepatocellular carcinoma
- RUQ v abdominal U/S

Transient U/S Elastography

- Fibroscan is a specific branded machine for measuring fibrosis with limited availability in AK
- Transient U/S elastography advantages
 - Painless, quick, easy to perform, reasonably accurate
 - Measures liver stiffness with decent correlation with pathology
 - Available at local imaging centers

Transient U/S Elastography

- Disadvantages
 - Operator dependent
 - Not as good in larger patients
 - Not good at identifying liver masses

Magnetic Resonance Elastography

- When would you need this?
- Advantages
 - Better correlation with pathology results than U/S
 - More accurate b/c not operator dependent
 - Can be used in conjunction with contrast enhanced MRI
 - Better at identifying secondary signs of cirrhosis and hepatomas

Magnetic Resonance Elastography

- Disadvantages
 - Limited availability
 - Cost

Liver Biopsy

- Advantages
 - Gold standard
 - Measures grade (inflammation) and stage (fibrosis)
 - Diagnose co-existing liver diseases
- Disadvantages
 - Invasive, has associated risks, higher cost than U/S
 - Can incorrectly stage fibrosis 20% of time

Indications for liver biopsy

- Two indirect markers show discordant results and the decision to treat HCV depends on the results
- When concurrent forms of liver disease in addition to HCV suspected
- To determine whether patients require lifelong surveillance for HCC

A case

- Is there additional health or social history you may have missed?
 - a tattoo while traveling in Thailand after college
 - tried snorting cocaine only once in early 20's ("not for me")
- Additional labs show a non-reactive HIV, a reactive HCV antibody, and immunity to HAV and HBV without prior HBV exposure
- HCV RNA quantitative lab returns at 1.2m

So, are they ready?

- The evaluation to treat HCV should be holistic
- Common barriers to consider are behavioral health issues and addiction
- Patient Readiness Attestation Assessment
- *Are you* ready? It takes a team to treat HCV

Thank you for your attention

- www.hepatitisc.uw.edu
- www.hcvguidelines.org
- Infectious Disease Management Group LLC

Dr. Benjamin Westley & Hope McGratty PA-C, MPH

4120 Laurel Street, Suite 204

Anchorage, AK 99508

ph 907.561.4362 fax 907.563.4498