Ask the Experts
Patient Education Program

Understanding the Progression of Liver Disease: Fibrosis

J. Clint Stanfill, MD
April 24, 2018
Fibrosis

- replacement of normal liver
- reactive phenomenon
- "stronger"
- has NO function of normal liver cells
Normal liver
Normal Liver Histology
Cirrhosis
Cirrhosis Histology
Causes of fibrosis

- Alcohol related liver disease
- Viral hepatitis
  - Hepatitis B, C, D
- Nonalcoholic fatty liver disease
- Autoimmune hepatitis
- Bile duct disease/damage
  - Gallstones
  - Primary sclerosing cholangitis/Primary biliary cirrhosis
- Drug induced liver injury
Factors that may hasten fibrosis

- Presence of two or more of the previous factors
- Alcohol or illicit drugs
- Tobacco smoking
- Elevated body mass index (BMI)
- High fat diet
Fibrosis is forever

- NO
- Conventional wisdom has been fibrosis/cirrhosis is irreversible
- Multiple animal models/clinical trials show improvement
- Regression of fibrosis may be MARKED
- Never COMPLETELY normal, small changes remain
Improvement in fibrosis following clinical cure of Hepatitis C

Fig. 1 Pre-treatment liver biopsy shows bridging fibrosis with focal nodular regeneration (Batts-Ludwig Stage 3-4) a, Trichrome special stain X 50. b, higher magnification showing focal sinusoidal fibrosis (Trichrome x100)

Fig. 2 Post-treatment liver biopsy shows portal and periportal fibrosis with focal bridging fibrosis (Batts-Ludwig Stage 2-3) a, Trichrome special stain X 50. b, higher magnification showing no sinusoidal fibrosis (Trichrome x100)
Histologic Improvement in Cirrhosis: 3 Years of Lamivudine Therapy

Wild-Type HBV
Primary sclerosis cholangitis following bile duct stenting
Managing fibrosis from YOUR perspective

- Appropriate diagnosis
- Treatment regimen
  - COMPLIANCE
- Avoiding additional risk factors for progression
  - Maintenance of healthy lifestyle factors
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Coping with Hepatic Encephalopathy

Carlos Romero-Marrero MD
Chief of Hepatology
April 24, 2018
Hepatic Encephalopathy

- Hepatic Encephalopathy (HE) is caused by the liver not being able to filter out toxins. These toxins remain in your blood stream reaching your brain causing mild to severe confusion.

- HE symptoms can start out slowly, so it’s important to catch them before they become severe.
Educational Goals

- Eliminating causes of HE
- Understanding Medications
- Proper Nutrition
Why do I get hepatic encephalopathy?
Why do I develop HE?

- Constipation
- Dehydration
- Fluid buildup
- Use of alcohol or certain medications
- Poorly controlled diabetes
- Infection or bleeding related to liver disease
• Prevent constipation:
  
  ● Take lactulose as prescribed
  
  ● Aim for 3-4 BMs per day
  
  ● Eat foods with fiber
  
  ● Exercise!
Prevent dehydration:

- 4 BMs maximum per day
- Hydrate with 8 glasses of water per day
UNLESS on a fluid restriction
Prevent fluid buildup

- Take diuretics as prescribed
- Keep track of your daily weights
- Manage your ascites by keeping paracentesis appointments
• Prevent fluid buildup

Eat a diet low in sodium

Avoid processed foods  Choose fresh options
Avoid alcohol & certain medications

- Avoid alcohol use

- Avoid opioid pain medications
  (oxycodone, percocet, morphine, dilaudid)

- Avoid anti-anxiety or sleep medications
  (xanax, klonopin, valium, ativan, ambien)

- Ask your liver doctor about safe alternatives
• Be in control of your diabetes!

• Minimize sugary foods and carbohydrates

• Monitor your blood sugars

• Take your insulin or diabetes medications as prescribed
Beware of infection or bleeding:

- Look for signs of infection (fever and chills)
- Take antibiotics as prescribed
- Look for signs of bleeding
- Keep your endoscopy appointments

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Medications

- Lactulose
- Rifaximin
- Zinc
Lactulose

The first line of defense against HE

- Decreases toxins (ammonia) = Decreases confusion (HE)
- Daily goal: 3-4 semi-formed BMs a day
- Side effects: diarrhea, bloating
Reaching your daily goal

- Titration: to take more or less than the prescribed dose of lactulose to achieve 3-4 semi-formed bowel movements a day
<table>
<thead>
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<th></th>
<th>1</th>
<th>Good start!</th>
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<tr>
<td></td>
<td>2</td>
<td>Keep going!</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>You have reached your goal for today!</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Keep taking your lactulose the way you have been.</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Stop taking lactulose for today.</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>You have had enough BMs today.</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Danger!</td>
</tr>
<tr>
<td></td>
<td>8+</td>
<td>Contact your liver doctor to reevaluate dosing of lactulose.</td>
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This information is not intended to replace the medical advice of your doctor or health care provider. Please consult your health care provider for advice about a specific medical condition.

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● Things to remember

● Take lactulose as prescribed even when not eating.

● Lactulose can be mixed with water, juice, or applesauce.
Rifaximin

- Antibiotic that acts on your stomach
- Prevents buildup of ammonia
- Taken on a daily basis regardless of confusion
- Can cause diarrhea or red urine
Zinc

- Improves overall nutrition
- Needed for the body to break down ammonia
- Take with a meal
- Can cause constipation
Nutrition
Protein

- Essential for the body
- Used to build and repair tissue
- Can be used for energy
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<th>CHICKEN</th>
<th>TURKEY</th>
<th>FISH</th>
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<td>EGGS</td>
<td>LENTILS</td>
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<td><img src="image4" alt="Milk" /></td>
<td><img src="image5" alt="Eggs" /></td>
<td><img src="image6" alt="Lentils" /></td>
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Use food labels to determine the amount of protein you are eating each day.
**Snacking is important**

<table>
<thead>
<tr>
<th>Time</th>
<th>Snack Description</th>
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<tr>
<td>Mid-morning</td>
<td>Nuts</td>
</tr>
<tr>
<td>Mid-afternoon</td>
<td>Protein bar</td>
</tr>
<tr>
<td>Before bedtime</td>
<td>Rice cereal</td>
</tr>
<tr>
<td>TIME</td>
<td>MEAL</td>
</tr>
<tr>
<td>---------------</td>
<td>----------</td>
</tr>
<tr>
<td>7:30 AM-8:00 AM</td>
<td>BREAKFAST</td>
</tr>
<tr>
<td>10:00 AM-11:00 AM</td>
<td>SNACK</td>
</tr>
<tr>
<td>1:00 PM-1:30 PM</td>
<td>LUNCH</td>
</tr>
<tr>
<td>3:30 PM-4:00 PM</td>
<td>SNACK</td>
</tr>
<tr>
<td>6:00-6:30 PM</td>
<td>DINNER</td>
</tr>
<tr>
<td>9:30PM-10:00 PM</td>
<td>SNACK</td>
</tr>
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Liver Cancer

Meelie DebRoy, MD FACS
April 24, 2018
Liver Cancer

- Most common type of liver cancer – hepatocellular carcinoma (HCC)
- Other types (less common) – cholangiocarcinoma, hepatoblastoma
- Does not include cancers that have spread from other areas of the body – colon, breast, lung
Liver Cancer - Symptoms

- Most people do not have any symptoms in the early stages
- Some include:
  - Losing weight without trying
  - Loss of appetite
  - Nausea/vomiting
  - Weakness/being tired
  - Yellow discoloration of your skin/white of your eyes
Liver Cancer – Risk Factors

- Chronic Hepatitis B/Hepatitis C infection
- Cirrhosis – irreversible scarring of the liver
- Inherited liver diseases – hemochromatosis, Wilson’s disease
- Fatty liver disease – alcoholic or non-alcoholic (associated with Diabetes)
- Toxins - aflatoxins
Liver Cancer - Screening

- No benefit for screening in the general population (no h/o liver disease)
- High-risk patients –
  - Hepatitis B
  - Hepatitis C and liver cirrhosis
  - Primary Biliary Cirrhosis
Liver Cancer – Screening/Diagnosis

- Blood testing – AFP (alpha-feto protein)
- Imaging – Ultrasound, CT scan or MRI
  - Usually done every 6-12 months
- Sample of liver tissue for testing - biopsy
Liver Cancer - Treatment

- Surgery
  - Surgery to remove the tumor – if extent of tumor and overall liver function is healthy enough to allow this
  - Liver Transplantation – depends on the stage of the tumor. During liver transplantation, your diseased liver is removed and replaced with a healthy liver from a donor.
Liver Cancer - Treatment

- Localized treatments
  - Injecting chemotherapy directly into the tumors
  - Placing beads filled with radiation into the tumor
  - Radiofrequency ablation (RFA) – heating/destroying cancer cells using a thin needle inserted into your abdomen
  - Cryoablation - freezing the cancer cells using a thin needle
Liver Cancer

Chemotherapy – May slow or stop the spread of tumors, but do not cure them

Radiation therapy

- Uses high-energy X-rays to destroy cancer cells and shrink the tumor
Liver Cancer - Support

- Be informed about your condition
- Talk to your family and friends
- Support groups in your area – ALF, National Cancer Institute, American Cancer Society
- Advance directives
Liver Cancer - Preparing

Questions for your doctor

- Type of cancer, stage of cancer
- Copy of Pathology report
- Do I need more testing?
- Treatment options?
- Is there one treatment you would recommend over others?
- Time to make a decision about treatment?
- Second opinion?
- Brochures, websites that you recommend?
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The Patient Perspective

Mindy Craft
April 24, 2018
An Unexpected Journey
Primary Sclerosing Cholangitis

- Causes Shrinkage of the Bile Ducts
- Considered One of the 7000 Rare Diseases in the World
- Identified Through ERCP Procedure
Living with Liver Disease

- Symptoms
  - Fatigue
  - Jaundice
  - Pruritus (Severe Itching)
  - Cognitive Disorders
  - Cholangitis

- ERCP
The Diagnosis
Cholangiocarcinoma
The Treatment
Go Big or Go Home!

- Chemotherapy
- 4D Radiation
- Brachytherapy
  - Internal Radiation
- Liver Transplant
“Ask the Experts” Patient Education Program
My Living Donor (Karen Ciolek)
Transplant Day
February 1, 2016

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Spend Liverversary Together