

## Cirrhosis: Diagnostic Approach and Complications

*This is a study guide for 4<sup>th</sup> year medical students. It is designed to help students develop deep approach to learning.*



### Objectives

1. To recognize the different clinical presentations of patients with Cirrhosis.
2. To compose a diagnostic approach to patients with Cirrhosis; what questions should be asked, physical signs looked for, and Investigations ordered.
3. To define and categorize the different complications of Cirrhosis.
4. To illustrate the general principles of management of these complications.

### How to use this guide

*\*This is an application of case-based learning approach.  
 \*You will come across clinical issues related to these cases. Work with these issues among a group of your colleagues.  
 \*NMS medicine, "Davidson's", "Clinical Medicine by Kumar" are all textbooks you may refer to.  
 \*You will develop clinical reasoning skills through these problems. Otherwise, you will continue to be a superficial learner!!*

How would you examine a patient with chronic liver disease?

### Case 1

A 40-year-old male presents with abdominal swelling, which has been progressive over several months. He has a history of gastrointestinal bleeding. On physical examination, there are spider angiomas and palmar erythema. Abdominal collateral vessels are seen around the umbilicus. There is shifting dullness, and bulging flanks are noted.



Where to start?

### First Step

**Know your pathology!!**

*It is a good time now to review what you have learned in pathology.*

What is Cirrhosis? How does it develop? What are the causes?

Is it true that liver Cirrhosis is a final common pathway of many types chronic liver diseases?

Back to  
case 1

- What further questions would you like to ask?
- Does this patient have Cirrhosis?
- What is the important first step in this patient's evaluation?
- What further investigations would you ask for? Would you consider liver biopsy for this patient?

Make a list of questions so you can use it next time you assess any patient with Cirrhosis.

Case 2

A 55 year-old-man has a 3-day history of sharp, diffuse abdominal pain and fever. The patient has alcoholic Cirrhosis that was documented by liver biopsy 2 years ago. Current medications are spironolactone, 200mg/d, furosemide, 80mg/d, and nadolol 20mg/d.

On P/E, temp is 38.9 C, pulse rate is 62/min, and BP is 110/60 mmHg. The abdomen is distended and tender to palpation with shifting dullness and a small reducible umbilical hernia.

Lab. Hemoglobin 8.3g/dl, WBC 8800/ul, platelets 55000/ul, urea 60mg/dl, creatinine 2.5mg/dl, Na 120meq/dl, K 3.0 meq/dl, Alk 250 U/L, AST 90U/L, ALT 30 U/L, Bilirubin 3.7mg/dl, total protein 5.3 g/dl, albumin 2.2 g/dl

Abdominal ultrasound shows a large amount of ascites, cirrhosis without focal hepatic lesions, varices, and an enlarged spleen. Paracentesis is done, the ascetic fluid PMN 650/ul and the albumin is less than 1.0 g/dl.

Do not run away. Sit down and analyze this case!



- Why does this patient take spironolactone and furosemide?
- Nadolol is non-selective B-blocker, what is its role here?
- What other tests in the ascetic fluid would you ask for?
- What is the new classification of ascites?
- What is your diagnosis?
- Say this patient presents with hematemesis, how would you manage him?
- There are other complications of Cirrhosis presented in this case, try to identify them?
- Why are we concerned about focal hepatic lesions?



Do not do  
this!!

This patient was admitted to the hospital and managed properly. On the first night of hospitalization the patient had difficulty sleeping and asked for a sleeping pill. His nurse called the oncall intern who prescribed lorazepam (Ativan).

What do you expect to happen next day?

What are the precipitating factors for this condition?



Now, go back to the objectives. Are you mastering all of them?



- You can go back to any textbook in medicine to find answers for these questions.
- Read in the section of Liver Diseases about Cirrhosis.
- You can read these articles “Diagnostic approach to the patient with cirrhosis” “Overview of the complications, prognosis, and management of cirrhosis” from uptodate.com. However, there are some details that you may not need to focus on.
- Can you support your answers with current evidence from the literature?

Good luck

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