

Discuss the underlying pathophysiological mechanisms of your assigned disease process. Which clinical manifestations observed in Bayani's case could be explained by the pathophysiological mechanisms?

Cirrhosis develops as a result of chronic liver injury that leads to progressive fibrosis and regenerative nodule formation, ultimately distorting normal hepatic architecture and impairing blood flow. This structural disruption increases intrahepatic resistance and contributes to portal hypertension, while hepatocellular dysfunction reduces the liver's ability to detoxify ammonia, synthesize proteins, and regulate immune responses (Fallahzadeh & Rahimi, 2022).

As liver function declines, ammonia and other neurotoxins accumulate in the bloodstream due to impaired metabolism and portosystemic shunting. This accumulation alters neurotransmission and contributes to hepatic encephalopathy (HE), which can present as subtle confusion, personality changes, or decreased level of consciousness (American Association for the Study of Liver Diseases [AASLD], 2022).

In Bayani's case, his new-onset mild confusion is particularly concerning and may reflect hepatic encephalopathy precipitated by infection. Cirrhosis is associated with immune dysfunction, making patients more susceptible to infections such as urinary tract infections (UTIs) (Fallahzadeh & Rahimi, 2022). His wife's report of foul-smelling urine, along with increased urination and fluid intake, raises concern for a UTI. Although his abdomen is soft and non-distended, absence of ascites does not exclude cirrhosis. Cirrhosis itself generally does not cause abdominal pain, however as the liver enlarges or becomes inflamed, stretching of the Glisson's capsule, which contains pain fibers, can cause a dull, aching pain in the right upper quadrant.

Analyze Bayani's clinical manifestations in the context of your assigned disease process. Do these findings support a diagnosis of your assigned disease process? Why or why not?

Bayani's clinical manifestations should be analyzed within the context of cirrhosis as a chronic, progressive condition characterized by hepatic fibrosis, impaired detoxification, and immune dysfunction. His most significant symptom is new-onset confusion. In cirrhosis, impaired hepatocellular function and portosystemic shunting reduce the liver's ability to metabolize ammonia and other neurotoxins, increasing the risk for