

CASE STUDY OF PATIENT WITH LIVER CIRRHOSIS

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Abstract

Liver cirrhosis is a disease in which normal tissue of liver replaced with scar tissue, liver cirrhosis is the 12th leading cause of deaths by disease in the world. Liver cirrhosis is caused by any factor that can damage liver tissues, mostly fatty liver and chronic liver diseases are the major cause of liver cirrhosis.

We are presenting here the case of an Asian man who was the victim of liver cirrhosis that was complicated by untreated hepatitis c. He was experiencing generalized body weakness, brownish tint in the urine, and sudden weight gain of 8-kgs within a period of three weeks. Blood pressure count was 100/60, pulse rate found to be 76 beats/min, temperature 98F, and enlarged umbilical. Laboratory tests including complete blood count, liver function tests, and urea tests came out to be significantly abnormal, complicating the case., ultra sound report revealed that his liver was enlarged, urinary bladder partially filled, umbilical hernia gape reported, ascites present (retention of fluid in the abdomen), Cirrhosis and splenomegaly were reported. His liver was damaged and liver functioning tests were not returning to normal, hepatologist recommended liver transplantation as the last resort for him.

There is the need of good clinical evaluation by a qualified therapist and use of appropriate investigative studies to secure patient from such a critical health hazard.

Keywords: chronic liver disease, liver transplantation,

Introduction

Cirrhosis is caused by scar tissue that forms in the liver in response to damage occurring over many years. Prolonged hepatocellular damage generates myofibroblast-like cells which produce collagen resulting in fibrosis. As hepatocytes are destroyed and liver architecture changes, hepatic function falls and increased resistance to portal blood flow produces portal hypertension. An increase in pressure within portal vein (the large vessel that carries blood from the digestive organs to the liver) this increase in pressure causes variceal bleeding. Hepatitis c and fatty liver are the most common causes of liver cirrhosis in Pakistan. Anything that can damage liver can cause liver cirrhosis including chronic viral infection of liver, blockage of bile duct diseases caused by abnormal liver function, such as hemochromatosis, a condition in which excessive iron is absorbed and deposited into the liver and the other organs.

Symptoms of cirrhosis vary with stages of the cirrhosis. In early stages patient may be asymptomatic. As the disease progresses symptoms such as loss of appetite, lack of energy, weight loss or sudden weight gain, ascites (abdominal distension due to fluid accumulation in abdomen), edema, brownish tint in urine, and fever observed.

DIAGNOSIS: in addition to complete blood count (CBC) other tests that might be conducted to diagnose cirrhosis are liver function tests, liver biopsy, esophagogastroduodenoscopy (EGD), CT or MRI scans of abdomen done for reasons other than evaluating the possibility of liver disease. Liver cirrhosis can be diagnosed by reduced levels of albumin in the blood, abnormal elevation of liver enzymes in the blood (such as ALT and AST)

TREATMENT: In the treatment of the cirrhosis first priority is to prevent further liver damage by consuming balanced diet and one vitamin daily, avoid non-steroidal anti-inflammatory drugs (NSAIDs). Prednisone and azathioprine are found effective in decreasing the inflammation of the liver. Removal of dietary salts (sodium) from diet, usually 2gm/day, and fluid intake should be 1.2 liter/day. Spironolactone (aldactone) and furosemide (Lasix) used to promote elimination of salt and water. In refractory ascites (when diuretics have no effect) a long needle or catheter is used to draw out the ascitic fluid from abdomen procedure known as abdominal paracentesis large amounts of fluid can be drawn out when ascites causes painful abdominal distension. Propranolol (Inderal) in

combination with isosorbide (isordil) found to be effective to lower the pressure in the portal vein in order to stop variceal bleeding; octreotide (sandostatin) also lowers the pressure in portal vein. Esophagogastroduodenoscopy (EGD) also performed in which bands are applied, band ligation involves applying the rubber bands around the variceas to obliterate them. Patients who fail to respond to beta blockers subjected to Trans jugular intrahepatic portosystemic shunt (TIPS), which is non surgical radiologic procedure to decrease pressure in portal vein. Severe conditions leads towards liver transplantation.

Case Presentation

A 45 years 78-kgs Asian man was presented to Sheikh Zayed Hospital Rahim Yar Khan Pakistan. He was experiencing generalized body weakness, brownish tint in the urine, and sudden weight gain of 8-kgs within a period of three weeks. Blood pressure count was 100/60, pulse rate found to be 76 beats/min, temperature 98F, and enlarged umbilical. He was a truck driver and used to live in environment with known exposure to radiations, fumes, chemicals, and other environmental allergens. He had a 7 year medical history of hepatitis c. Laboratory tests including complete blood count, liver function tests; urea tests came out to be significantly abnormal, complicating the case. Liver function tests revealed that the blood glucose was 143mg/dl (normal range 80-140), blood urea 90mg/dl (normal range 17-43), creatinine level was 2.4mg/dl, and bilirubin 2.2mg/dl alanine aminotransferase (ALT) 89u/l, aspartate amino transferase 78u/l, serum albumin 2.1g/dl (normal range 3.5-5.2). Sodium level was 165 (normal range 135-155) potassium 8.4 (normal range 3.2-6.1) hematology tests revealed hb level 6.2mg/dl neutrophils 77% lymphocytes 20% eosinophils 0.2. reduced levels of serum albumin and abnormal elevation of liver enzymes (ALT and AST) were indicating the liver cirrhosis, so he recommended to CT-scan and ultra sound, ultra sound report revealed that this liver was enlarged, urinary bladder partially filled, umbilical hernia gape reported, ascites present (retention of fluid in the abdomen), Cirrhosis and splenomegaly were reported. On the basis of medical investigation physician prescribed him to consume balanced diet, medication includes prednisolone 20mg/day (B.D) in combination with azathioprine 200mg/day orally in two divided doses for one week, in the second week

prednisolone doses reduced to 10mg/day(B.D),methylcobal(vitamin B-12)100mcgs injection (I.M) once a week, aldactone 200mg/day(B.D), Lasix 40mg/dose every 6-8 hours, propranolol 40mg/day(B.D), isordil 20mg/dose every 8-12 hours orally, sandostatin 20mg in 100cc n/s at 25drops/min in continuous infusion. Risek 40mg/dose (B.D), ceftriaxone 1gm*4 (B.D) orally, patient was developing massive ascites, he was not responding to the diuretic medications,hepatologist recommended abdominalparacentesis to draw out the ascetic fluid. Condition of the patient was worsened, he had few episodes of hematemesis, esophagogastroduodenoscopy (EGD) performed, 4 rubber bands were applied to the bleeding varices to obliterate them. His liver was damaged and liver functioning tests were not returning to normal, hepatologist recommended liver transplantation as the last resort for him.

Discussion

This is the case study of an elder patient that was complicated by untreated hepatitis c, dose regimen was designed to prevent further damage to the liver, prednisolone and azathioprine combination therapy found effective in decreasing the liver inflammation by suppressing the immune system. Second priority is to treat the complications associated with liver cirrhosis, dietary salts restricted in diet to decrease edema and ascites, diuretics used to promote the elimination of salts and water as they increase the pressure within the portal vein, during treatment with diuretics kidney functions monitored regularly to ensure that the too much diuretics are not being used as they may cause kidney dysfunction.Propranolol was given to lower the pressure in portal vein and is used to prevent initial bleeding and re-bleeding from variceas but it does not adequately lowers the portal pressure, than propranolol was in combination with isosorbide dinitrate to prevent bleeding. Esophagogastroduodenoscopy performed to obliterate the bleeding varices, since he was hospitalized for bleeding varices he was at high risk of developing spontaneous bacterial peritonitis as prophylaxes of (SBP) antibiotic ceftriaxone recommended.

Conclusion

There should be complete treatment; incomplete treatment may be fatal as it causes more severe second exposure of the disease. Liver cirrhosis is

the last stage of chronic liver disease,our report emphasizes on the fact of need of good clinical evaluation by a qualified therapist and use of appropriate investigative studies to secure patient from such a critical health hazard. If he had a proper treatment of hepatitis c, he would have better health condition and a longer life span.

Recommendations

Patients with acute episodes of gastrointestinal bleeding should receive prophylactic antibiotics and have endoscopy performed within 24 hours.

Ascites should be treated with Reduced amount of salt you consume (typically less than 1500 milligrams per day) if you are retaining fluid.

Patients not responding to diuretics should recommended abdominal paracentesis to draw out the ascetic fluid

Take vitamin supplements, especially B-complex vitamins.

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