Prevention & therapy of cirrhotic ascites

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Cirrhosis is the 8th leading cause of death in Taiwan as well as in the United States. Approximately 85% of ascites is estimated be evoked by liver cirrhosis. Ascites is the most common cause of cirrhosis that leads to hospitalization. Up to 50% of compensated cirrhotics develop ascites during 10 years of follow-up. The development of ascites in cirrhotic patients denotes a turning point of increased morbidity and mortality stage. The 1–year mortality of cirrhotic patients with ascites was estimated to be 15% and 5-year mortality was 44%. Pathophysiology of ascites is now believed to be related to peripheral vascular dilatation. Because of effective blood volume inadequacy, sodium retention elicited by enhanced rennin-angiotensin-aldosterone and interplay with other factors plays a pivotal role in the development of ascites.

For patients with new-onset of ascites, abdominal tapping with ascetic fluid examination is advised. SAAG (albumin gradient between serum and ascites) > 1.1 gm as well as ascitic protein < 2.5 gm/dl may help to differentiate cirrhotic ascites from other etiologies. Ascitic white cell counts are useful for diagnosis of spontaneous bacterial peritonitis. Ascitic CA-125 levels are usually elevated in patients with ascites, thus routine examination is forbidden to avoid overdiagnosis of ovarian carcinoma.

The mainstay of therapy for cirrhotic ascites is salt restriction. For mild to moderate ascites, diuretic therapy with furosemide and spironolactone to reduce body weight 300 to 500 gm daily is a practical policy. Rapid body weight loss should be avoided to prevent occurrence of complications such as renal impairment and hepatic encephalopathy. For massive ascites, abdominal tapping together with colloid supplement such as albumin infusion may be required. Approximately 15% of cirrhotic ascites is refractory to traditional management. The use of TIPS (transjugular intrahepatic portosystemic stent shunt) may be indicated for refractory ascites. Other than control of ascites, the underlying etiologies such as hepatitis B virus infection (HBV) or hepatitis C infection should be treated with antiviral agents if feasible. Alcoholic patients should be advised to be abstinent from any alcoholic beverage. It has been demonstrated that up to 70% of HBV related ascites could be improved by antiviral therapy. The necessity of liver transplantation in cirrhotic patients with refractory ascites also could be reduced if antiviral therapy is effective.