

ADVANCES IN HEPATOLOGY

Current Developments in the Treatment of Hepatitis and Hepatobiliary Disease

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Management of Patients With Refractory Ascites



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G&H What are the typical first steps of management for ascites?

SA Ascites, or the buildup of fluid in the abdominal cavity, is related to liver disease in the majority of patients. However, it is important to make sure that secondary causes of ascites, such as heart failure, a new clot in the liver, and malignancy, are not missed in a patient's workup. When a patient develops ascites for the first time, cross-sectional imaging should be performed as well as diagnostic

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paracentesis and fluid studies. The first step after establishing a diagnosis of ascites is to try to control it with diet. If low sodium intake does not help resolve the patient's ascites, the next step is adding diuretics. When starting diuretics, providers usually suggest using a combination of loop diuretics and an aldosterone receptor antagonist at a ratio of 4 to 10 for furosemide to spironolactone.

G&H Is restriction of dietary sodium and fluid typically effective to manage ascites?

SA Yes, often. If patients are compliant or adherent to a low-salt diet and fluid restriction, their sodium levels should improve as should their fluid status. One of the most common causes of ascites is liver disease owing to alcohol use. Often, ascites resolves once patients start abstaining from alcohol.

G&H How can providers promote dietary salt adherence in patients with ascites?

SA Diet is extremely important, probably more than medication. It is suggested that patients target less than 2000 mg of sodium intake per day. Patients with ascites should be referred to a dietitian to help them with dietary choices. It is important to emphasize that patients should read nutritional labels to find out how much sodium there is in foods they need. In addition, patients should be advised not to use salt substitutes, as they tend to be bad for ascites as well.

G&H What criteria should be used to establish a diagnosis of refractory ascites?

SA Ascites becomes refractory in one of two ways. One is if the ascites is still not under control despite the patient following a low-salt diet and going up to the maximum dose of diuretics. The second way that ascites can be considered refractory is if escalation of diuretics cannot be achieved because the patient is experiencing side effects from the diuretics and thus cannot tolerate them. Side

effects can include low blood pressure, changes in electrolytes, signs of dehydration, and cramping.

G&H What are the potential consequences of refractory ascites?

SA As patients require repeated paracentesis, they are at risk of complications of the procedures such as bleeding. Patients with refractory ascites may also be at risk for spontaneous bacterial peritonitis.

G&H When should serum sodium levels impact treatment decisions?

SA At times, the patient's serum sodium can become low, especially when the patient's disease is advancing. Monitoring of serum sodium tends to be part of routine blood work. Usually, the first step tends to be modifying some of the patient's medications to see whether their serum sodium level can improve. If that does not happen, especially if the patient has refractory ascites, it can be a sign of disease progression. In that case, the next step is initiation of fluid restriction in addition to the monitoring and managing of diuretics.

G&H How effective is large-volume paracentesis in the management of refractory ascites?

SA If patients cannot control their ascites with a combination of dietary changes as well as diuretics, providers often think about performing large-volume paracentesis, which is defined as the removal of at least 5 L in a single setting. Large-volume paracentesis tends to be effective in the short term to improve symptoms. Some patients need one paracentesis every few weeks or every month. Other patients require paracentesis more frequently, such as once a week.

G&H Should albumin be administered with large-volume paracentesis?

SA Intravenous albumin is often used in cases of large-volume removal of fluid, which as mentioned is considered to be more than 5 to 6 L in a single setting. In that scenario, providers use 25% intravenous albumin at approximately 6 g per liter.

G&H How early in the disease process should a transjugular intrahepatic portosystemic shunt be considered for refractory ascites?

SA If patients are experiencing recurrence of ascites,

placement of an early transjugular intrahepatic portosystemic shunt (TIPS) may be an option, especially if they are receiving frequent paracentesis. However, providers need to be mindful if they reverse the cause of the ascites. For example, some of the fluid may improve if patients stop drinking alcohol. If that is the case, it may be possible to avoid TIPS. However, if ascites cannot be controlled with a low-salt diet and maximum doses of diuretics, early TIPS may need to be considered.

G&H Is there a role for nonselective beta blockers in patients with refractory ascites?

SA Nonselective beta blockers play an important role in the management of patients who have liver disease. However, there tends to be a window where these medications are effective and safe in patients who start developing

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ascites. Providers often tend to stop nonselective beta blockers as the liver disease progresses and blood pressure trends lower.

G&H When should liver transplantation be considered in the management of refractory ascites?

SA Liver transplantation should be considered in almost any patient at the first sign of liver decompensation. Because ascites is often considered to be one of the first events defining decompensation, early consideration of liver transplantation and workup for the procedure should be initiated once patients start developing ascites. Diuretics, a low-salt diet, and TIPS are merely temporizing measures. True improvement in outcomes will only come with liver transplantation unless the cause of the ascites is reversible.

G&H Should any other treatments be considered in the management of refractory ascites?

SA There are a number of investigational devices, some of which may be approved shortly. One of these is an implantable ascites pump that is currently available in Europe. It may become available in the United States in the future to help control ascites. In patients with palliative needs, sometimes a peritoneal drain is considered.

G&H What can be done to help prevent the development of refractory ascites?

SA All attempts should be made to identify reversible causes. For example, this may include alcohol cessation and, in select cases, treatment of underlying hepatitis C if applicable.

G&H What are the priorities of research regarding refractory ascites?

SA An important priority is determining the tipping point when ascites starts developing. An active area of research is looking at why some patients develop ascites

while others do not. Additionally, research is needed on which medications can be started early in the course of a patient's liver disease so that ascites does not develop in the future.

Disclosures

Dr Asrani has no relevant conflicts of interest to disclose.

Suggested Reading

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