Hepatorenal syndrome

The hepatorenal syndrome is one of many potential causes of acute kidney injury in patients with acute or chronic liver disease. Affected patients usually have portal hypertension due to cirrhosis, severe alcoholic hepatitis, or (less often) metastatic tumors, but can also have fulminant hepatic failure from any cause. The hepatorenal syndrome represents the end-stage of a sequence of reductions in renal perfusion induced by increasingly severe hepatic injury. The hepatorenal syndrome is a diagnosis of exclusion and is associated with a poor prognosis. The presumed mechanism is increased production or activity of vasodilators, mainly in the splanchnic circulation, with nitric oxide thought to be most important.

Presentation - Acute or chronic liver disease with:

1. A progressive rise in serum creatinine
2. Normal urine sediment
3. No or minimal proteinuria (<500 mg/day)
4. Low Na urine excretion (< 10 meq/L)
5. Oliguria

Type 1 = rise in creatinine < 2.5 mg/dL in < 2 weeks

Type 2 = ascites unresponsive to diuretics

Diagnosis: Hepatorenal syndrome is diagnosed based upon clinical criteria. There is no one specific test that can establish the diagnosis

Rx: The ideal therapy for hepatorenal syndrome is improvement of liver function from recovery of alcoholic hepatitis, treatment of decompensated hepatitis B with effective antiviral therapy, recovery from acute hepatic failure, or liver transplantation. The ability of liver function to improve with abstinence from alcohol and effective antiviral therapy of hepatitis B is remarkable. Drugs to use include: Norepinephrine + albumin, Vasopressin, terlipressin therapy + albumin, midodrine, octreotide, and albumin, TIPS, liver transplant +/- dialysis (as bridge to transplant).

Question:

The best approach to treat a patient with hepatorenal syndrome is:

a. Early liver transplant
b. Aggressive treatment of ascites
c. Induced diuresis
d. Terlipressin therapy

Answer: A. See above