COMPLICATIONS OF LIVER CIRRHOSIS

VARICEAL BLEED

1º PROPHYLAXIS

NON-SELECTIVE BETA-BLOCKER
propranolol 10-20 mg daily – BID
nadolol 40 mg daily
↓ variceal growth in small varices, mortality

ENDOSCOPIC VARICEAL LIGATION
↓ mortality

ACUTE VARICEAL BLEED

HEMODYNAMIC STABILIZATION
Volume resuscitation
Hemodynamic support (blood, FFP, platelets)
Protection of airway (intubation)
Endoscopic Variceal Ligation (sclerotherapy if not available)
+
OCTEOCRIDE 50 mg IV bolus,
followed by continuous infusion of
50 mcg/h for 3-5 days
+
ANTIBIOTICS if SBP suspected
Collect ascitic fluid & initiate empiric therapy
(ceftriaxone or cefotaxime)
or
ANTIBIOTICS to prevent SBP
Ceftriaxone/cefotaxime while NPO, then switch to PO
TMP/SMX, norfloxacin or ciprofloxacin

RE-BLEED →

SAVAGE THERAPY

BALLOON TAMPONADE
AKA BLAKEMORE TUBE
Used as temporary bridge to other definitive therapy
Not recommended for use > 24 h

TRANSUGULAR INTRAHEPATIC PORTOSYSTEMIC STENTS (TIPS)
Last line therapy
Increases post-txt encephalopathy

2º PROPHYLAXIS

NON-SELECTIVE BETA-BLOCKER
propranolol 10-20 mg daily – BID
nadolol 20-40 mg daily
↓ re-bleeding & mortality

ASCITES

NON-PHARM THERAPY
Abstinence from alcohol
Sodium restriction < 2 g/day
Fluid restrict (if sodium < 124-126 mmol/L) w/ sx ascites
Avoid NSAIDs (high risk for renal failure

DIURETICS
SPIRONOLACTONE 50-100 mg/d (max 400 mg)
FUROSEMIDE 20-40 mg/d (max 160 mg)
Commonly combined as ratio 2.5:1
Increase q3-5 days to weight loss (~ 0.5 kg/day)

REFRACTORY ASCITES

SERIAL PARACENTESIS
Remove 5-10 L q1-2 weeks
May continue diuretic

TIPS

LIVER TRANSPLANT

TENSE ASCITES

PARACENTESIS
If > 5 L of ascitic fluid removed, give 6-8 g/L of albumin (reduces circulatory derangements)

CONTINUE SODIUM RESTRICTION AND DIURETICS
in pts with diuretic-sensitive ascites after removing enough fluid to reduce intra-abdominal pressure

HEPATIC ENCEPHALOPATHY

REMOVE & REVERSE PRECIPITATING FACTORS

FACTOR	TREATMENT POSSIBILITY
GI bleed	Endoscopic ligation, octreotide
Infection	Antibiotics, paracentesis
Electrolyte disturbance	Replace electrolytes, modify diuretics
Sedatives	Discontinue drugs
Constipation	Lactulose, PEG 3350
Renal insufficiency	Modify diuretics, D/C nephrotoxic drugs
Dehydration	Fluids, modify diuretics
Poor adherence	Education
Protein	Do not restrict protein (malnourished)
Portohepatic shunts (TIPS)	n/a
Blood transfusion	n/a

GIVE AMMONIA REDUCING AGENTS

LACTULOSE
NG tube/oral: 30-45 mL PO q1h until catharsis,
then 15-30 mL PO BID-QID (titrate to 2-4 loose BMs/day)

Obtunded: 300 mL syrup in 700 mL water as
retention enema for 30-60 min daily-BID

PEG 3350
Only an alternative if you give 4 L !!!
Lactulose is preferred

ALTER GUT FLORA

RIFAXIMIN
500 mg PO BID or 400 mg PO TID
$$$ but consider if failed lactulose

OTHERS
Neomycin (ototoxicity & nephrotoxicity)
Metronidazole, oral vancomycin (limited evidence)