04/09/25 Morning Report with @CPSolvers

*"One life, so many dreams" **Case Presenter**: Hee Mun (@) **Case Discussants**: Dr.Rich Snyder (@) and Hans Kaus (@)*

Scribing (Sawsan)

CC: Progressive abdominal distension, dyspnea, oliguria, and fatigue.

HPI: 52-year-old man with **known cirrhosis** (Child B, MELD 30) and refractory ascites presents with progressive abdominal distention, shortness of breath, and fatigue. He reports reduced urine output, difficulty breathing when lying flat, and increasing confusion over the past few days. Symptoms worsened despite recent paracentesis and ongoing diuretics. He **denies** fever, chest pain, hemoptysis,or hematemesis. **No** recent sick contacts or travel. **NO** nsaid or contrast dye use

PMH:
Cirrhosis Child B
MELD 30
Refractory ascites for the last 6 months despite of tapping

EGD - no varices

Meds:
spironolactone
Furosemide

Fam Hx:

Soc Hx:

Health-Related Behaviors: severe Alcohol drinking

Allergies:

Vitals: T: afebrile **BP:** 110/70 **RR:** 23 **HR**: 90 **Sat:** 96%
Exam: Gen: Scleral icterus, no lymphadenopathy
HEENT:NO JVD Regular rate and rhythm, no murmurs
CV: NO JVD Regular rate and rhythm, no murmurs
Pulm: Decreased breath sounds at bilateral bases, no rales
Abd: Markedly distended, positive fluid wave, shifting dullness, diffuse tenderness without rebound
Neuro: Alert but mildly confused, asterixis
MSK: Swelling of lower limbs, bilateral pulses
Skin: spider angiomas on upper chest

Notable Labs & Imaging:
Hematology:
WBC: 12k Hgb:12 Plt:72 Hct: MCV:macrocytic
Chemistry
Na:131 K:4.5 Cr: 3(baseline 1) BUN:40 Cl: 93 AST:64 ALT: 53 ALP: 150 Bili:2.9
INR: 1.5 Cr clearance 28
pH 7.2, pCO2 25 bicarbonate 14 Lactate 1.9, ammonia elevated AG 25
Albumin 2.5 and globulin 3.5 (albumin globulin reverse) Ferritin 665 B12 low
Procalcitonin 0.7
Blood and urine cultures **negative;**
Urinalysis : bland sediment , no RBCs/WBCs/casts/proteinuria, **urine sodium <10 mEq/L, FENa <1%, urine osmolality >500 mOsm/kg.**

CXR: mild effusion.
ECHO: wnl
Ascitic fluid: PMN ≥250/mm³ (SBP), total protein <1.0 g/dL, SAAG ≥1.1 g/dL (portal HTN), glucose >50 mg/dL, Gram stain/culture negative
Renal US : no HDN, stones, or masses.
Fluid challenge with albumin and ceftriaxone started unsuccessful started -> HRS -> midodrine and octreotide -> liver transplant and hemodialysis

Dx HRS

Problem Representation: 52 Y/O M with a PMH of cirrhosis presenting with progressive abdominal distention,dyspnea,oliguria for the past few days, labs showed AGMA and CR of 3 (baseline 1) with UA and labs consistent with AKI and ascitic fluid consistent with SBP..

Teaching Points (Parisa):
Abdominal distention: fluid ascites (high albumin vs low)/ bowel obstruction/ gas related issues ileus.
Ascites + renal → increasing intra abdominal causing decrease prerenal azotemia; urine output.
More frequent paracentesis in someone w cirrhosis (refractory ascites) → worsening portal HTN>30 ; refractory to diuretics; suspected hepatic renal syndrome HRS; splanchnic vasodilation → renal vasoconstriction → severity AKI→ Tx: Volume expansion and albumin improve urine output → distinguish ATN and HRS
Initial treatment → diuretics (aldactone; lasix); the combination is beneficial as they target different mechanism.
Potential condition to monitor decompensated liver dx: SBP GI bleeding PNA other infectious etiology; Over diuresis is considered →metabolic alkalosis: can change balance between ammonia and ammonium → worsening hepatic encephalopathy.
Early stage liver dx: chronic respiratory alkalosis.
AKI liver disease Urine Na → prerenal; ATN;HRS;Increase intraabdominal → Urine Na<10 + increasing urine output →improved kidney function and less vasoconstriction → r/o AKI before initiating vasoconstrictors.
ATN (granular cast) vs HRS → both low urine Na
Management HRS: diagnostic Paracentesis (low volume to reduce intra-abdominal pressure); IV albumin; bladder scan; Octreotide SQ; vasopressor (alpha agonist; maintaining MAP); bicarbonate.
Understanding hepatorenal pathophysiology is more crucial than diagnosing HRS.