Quiz 24-11-2025-HRS

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QUESTION 1

A 54-year-old man with decompensated alcoholic cirrhosis (MELD 32) develops stage 2 AKI. He is on terlipressin and albumin for suspected **HRS-AKI**. Urine NGAL (ELISA) at 12 hours of therapy is **320 ng/mL**. Urine microscopy shows occasional granular casts. Fractional excretion of sodium is 0.3%.

Which interpretation best fits this biomarker pattern?

OPTIONS

A. uNGAL <400 ng/mL reliably suggests functional HRS-AKI without tubular injury
B. uNGAL >300 ng/mL (ELISA) indicates significant tubular injury despite low FENa
C. Albumin infusion reduces uNGAL and may falsely lower this value
D. uNGAL cannot distinguish HRS-AKI from ATN because its accuracy improves only by day 3

Winner --Dr. Kumaresh

- Final year DNB Resident
- GMKMCH salem

Answer C

- **HRS-AKI:** uNGAL usually **<100–150 ng/mL**
- **ATN in cirrhosis:** typically **>220–300 ng/mL** (ELISA)
- A value of **320 ng/mL** indicates **structural tubular injury** → ATN or mixed **HRS–ATN**
- Low FENa **does not exclude ATN** in cirrhosis due to intense vasoconstriction physiology
- **Albumin does NOT suppress NGAL** → no false-low expected
- uNGAL is **most useful early** (2–12 hrs) for differentiating HRS vs ATN
- Higher levels of uNGAL values predict poor response to therapy: response rate of 33% in patients with uNGAL ≥ 220 ng/mL vs 70% in those with uNGAL<220 ng/mL.

QUESTION 2

- A 54-year-old man with decompensated cirrhosis develops **HRS-AKI**. Despite optimal terlipressin and albumin therapy, he remains dialysis-dependent. He has required **RRT at least once every 7 days** and his **eGFR has been ≤25 mL/min weekly for the past 6 weeks**. Which is the **most appropriate transplant strategy** according to OPTN criteria?

A. Liver transplant alone
B. Liver transplant alone with post-LT “safety-net” priority after 60 days
C. Simultaneous liver–kidney transplant (SLKT)
D. Delay listing until renal recovery is seen

Winner – Dr. Sunil kumar Behera

- 2nd year DM Nephrology Resident
- AIIMS Raipur

Answer D

- **LT = best therapy** for HRS-AKI; survival superior to medical therapy.
- HRS-AKI patients have **higher wait-list mortality** than non-HRS patients at the same MELD.
- **Terlipressin response lowers creatinine → lowers MELD**, masking true mortality risk.
- **Renal recovery before LT improves outcomes**; prolonged pre-LT RRT reduces recovery & survival.
- **SLKT (OPTN 2016)** indicated when sustained AKI ≥6 weeks with:
  - RRT ≥1×/week *and/or*
  - eGFR ≤25 mL/min weekly.
- **Safety net:** After LT alone, persistent renal dysfunction at 60 days → **priority for kidney transplant for 1 year**

Thank you