

AKI

* S3:-

* ARF is one thing that ~~may~~ probably needs dialysis but AKI is a broad spectrum of all things that happen in the kidney

* S4:-

* AKI might include minimal renal injury up to ARF which needs dialysis

* S6:-

* this is for adults

* AKI is defined as ANY of the following

* SCr = serum creatinin

* S9:-

* don't forget to ask the patient about urine output

* don't focus on what is AKIN or RIFLE just to have some idea about who is in risk of injury or failure

S17:-

* but is not the only

* tubules are very sensitive to injury

S18:-

* we believe that AKI is an inflammation

S19:-

- * \downarrow urine output is a good clinical sign because sometimes there is AKI but SCr is low because there is no time for SCr to \uparrow to show that there is something happening in the kidneys
- * when SCr is \uparrow probably we lost much of the kidney function

S21:-

- * there are some studies to see which bio markers might help us to detect Renal Dysfunction earlier than the SCr
- * Cr may take 1-2 days to rise
- * we don't use them in practice yet because they are very expensive & are not applicable for all causes of AKI

S22:-

- * nephrons here are intact because the time is not enough to ~~destroy~~ destroy the kidney but if the hypoperfusion persists it will lead to structural injury
- * if you acted quickly before structural injury you ~~may~~ may save the kidney

S23:-

- * systemic vasodilatation ~~with~~ because of sepsis

S24:-

- * heart surgery
- * hepato-renal syndrome → read about this

S25:-

- * renal insult is the worst scenario due to structural abnor.
- * if pre-renal problem is not treated it will end up to be renal

S28:-

- * HUS = hemolytic Uremic syndrome (very bad that affects kidney)
- * Acute interstitial nephritis is due to NSAIDs or medications

S29:-

- * check by U/S
- * PUV = Posterior urethral Valve
- * neuropathic ~~bladder~~ bladder is very common in children in Jordan

S30:-

- * AKI in neonates is common

S31:-

- * Pt. is unwell due to electrolyte imbalance & HTN or ↓ waste products & Urea induced neuropathy & edema
- * breathing changes due to acidosis

S32:-

- * diarrhea + blood in stool + Vomiting + pallor → HUS
- * Pharyngitis ~~& skin mp~~ → Post. strep. GN
- * skin infection → ~~could~~ could be due to Vasculitis which affects kidneys

S33:-

* Family Hx is very important (in test)

S37:-

* Hyperkalemia may cause death due to cardiac arrhythmia

* treat shock before dealing with the cause of injury

S38:-

* X-ray for Pulmonary edema & USS for post-renal causes

S40:-

* the best way is by Hx

* these tests sometimes couldn't be done due to anuria

* FeNa is the most sensitive test to determine if the injury is pre or ~~renal~~ renal but it is more for prognosis (renal has worse prognosis)

S43:-

* Volume overload is a factor with poor outcome because it will \uparrow BP & will cause pulmonary edema \rightarrow shortness of breath

S44:-

* this fluid equation is for a day OR reassess the Pt. every 6-12 hours and reevaluate and readjust your measurements

* read about what are crystalloids & colloids.

S45:-

- * normal K^+ level in pediatrics is 3.5-5.5
- * Ca gluconate to prevent CARDIAC toxicity
- * Salbutamol nebulizer is to shift the K^+
- * Na bicarbonate is for acidosis (see the relation between it & K^+)
- * Na or Ca resonium is the only drug that remove K^+ from the body (others just shift it in)

S46:-

- * don't keep giving diuretic if there is no urine output

S48:-

- * do KFT before giving contrast

S49:-

- * RRT includes dialysis modalities + renal transplantation
- * CRRT uses special machines

* S50:-

- * Pt. w/ seizures / Pt. w/ hyperkalemia unresponsive to ttt
- * anemia due to HUS (because Pt. needs blood transfusion but he is anuric)

S53:-

- * recovered AKI Pt.s need's ~~to~~ long time follow up