

Acute Kidney Injury (AKI)

1. What is the primary cause of prerenal acute kidney injury?
 - a) Intrinsic kidney damage
 - b) Obstruction in the urinary tract
 - c) Decreased renal perfusion
 - d) Nephrotoxic drugs

2. Which of the following is NOT a common cause of intrarenal acute kidney injury?
 - a) Acute tubular necrosis
 - b) Pyelonephritis
 - c) Dehydration
 - d) Glomerulonephritis

3. Postrenal acute kidney injury is primarily caused by:
 - a) Renal artery stenosis
 - b) Urinary obstruction
 - c) Glomerular damage
 - d) Nephrotoxicity

4. How does a prerenal cause of AKI typically affect the glomerular filtration rate (GFR)?
 - a) Decreases GFR
 - b) Increases GFR
 - c) No effect on GFR
 - d) Fluctuates widely

5. What is the characteristic clinical manifestation of oliguria?
- a) Increased urination
 - b) Decreased urination
 - c) Painful urination
 - d) Frequent urination
6. Elevated serum creatinine levels indicate:
- a) Normal kidney function
 - b) Impaired kidney function
 - c) Urinary infection
 - d) Fluid overload
7. Early recognition of AKI is crucial because:
- a) It prevents hypertension
 - b) It improves fluid balance
 - c) It can lead to early intervention and improved outcomes
 - d) It reduces pain levels
8. Which of the following is the most common cause of AKI in hospitalized patients?
- a) Postrenal injury
 - b) Prerenal injury
 - c) Extrarenal injury
 - d) Intrarenal injury
9. Chronic dehydration can lead to which type of AKI?

- a) Prerenal
- b) Intrarenal
- c) Postrenal
- d) All of the above

10. What laboratory test is most sensitive for detecting AKI?

- a) Serum creatinine
- b) Blood urea nitrogen (BUN)
- c) Urinary creatinine
- d) Urinalysis

Renal Calculi

11. The formation of renal calculi is primarily due to:

- a) Infection
- b) Turbulent blood flow
- c) Supersaturation of urine with certain substances
- d) Increased urine output

12. Which factor most significantly contributes to the supersaturation of urine leading to stone formation?

- a) High fluid intake
- b) Hypercalcemia
- c) Low dietary sodium
- d) Vegan diet

13. What type of stone is most commonly associated with a urinary tract infection?

- a) Calcium oxalate stones
- b) Uric acid stones
- c) Struvite stones
- d) Cystine stones

14. Calcium oxalate stones form in urine that is:

- a) Alkaline
- b) Acidic
- c) Hypotonic
- d) Isotonic

15. Uric acid stones are most likely to form in which condition?

- a) Gout
- b) Diabetes mellitus
- c) Cystic fibrosis
- d) Hypertension

Chronic Kidney Disease (CKD) Staging

16. Chronic Kidney Disease (CKD) is classified into stages based on:

- a) Serum creatinine levels
- b) Urinary albumin excretion
- c) Estimated glomerular filtration rate (eGFR)
- d) Symptoms present

17. Stage 1 CKD is defined by an eGFR of:

- a) Greater than 90 mL/min
- b) 60-89 mL/min
- c) 30-59 mL/min
- d) Less than 15 mL/min

18. At what stage of CKD should a patient be referred to a nephrologist?

- a) Stage 1
- b) Stage 2
- c) Stage 3
- d) Stage 4 and 5

19. Clinical implications of Stage 2 CKD include:

- a) Need for dialysis
- b) Monitoring kidney function and risk factors
- c) Immediate kidney transplant
- d) No clinical implications

20. What is a common complication of advanced CKD?

- a) Hypoglycemia
- b) Hypertension
- c) Constipation
- d) Asthma

Complications of CKD

21. Anemia in CKD is primarily due to:

- a) Decreased erythropoietin production
- b) Increased blood volume
- c) Iron overload
- d) High Vitamin B12 levels

22. Mineral bone disorders in CKD arise mainly due to:

- a) Excess dietary phosphate
- b) Altered calcium and phosphate metabolism
- c) Increased parathyroid hormone secretion
- d) Both b and c

23. Which condition is associated with renal osteodystrophy?

- a) Diabetes mellitus
- b) Cardiovascular disease
- c) Secondary hyperparathyroidism
- d) Hyperkalemia

24. Patients with CKD are at increased risk for:

- a) Hypercalcemia
- b) Heart attacks
- c) Dehydration
- d) All of the above

25. How does renal failure lead to anemia?

- a) Decreased erythropoietin levels
- b) Increased blood volume
- c) Increased hemolysis

- d) All of the above

Diagnostic Approaches

26. To differentiate between prerenal and intrarenal AKI, which test is often performed?

- a) Urinalysis
- b) Serum creatinine
- c) Urine electrolytes
- d) Blood urea nitrogen (BUN)

27. A low urine sodium concentration suggests which type of AKI?

- a) Prerenal
- b) Intrarenal
- c) Postrenal
- d) Nephrotoxic

28. A urine osmolality greater than 500 mOsm/kg typically indicates:

- a) Prerenal AKI
- b) Intrinsic renal AKI
- c) Postrenal AKI
- d) Normal renal function

29. What is the significance of a high BUN/creatinine ratio in the evaluation of AKI?

- a) Indicates intrinsic renal damage
- b) Suggests prerenal azotemia