

# ATI Acute Kidney Injury and Chronic Kidney Disease//ATI PN COMPREHENSIVE EXIT EXAM RETAKE 2023- 2024 WITH NGN QUESTIONS (ACTUAL EXAM)

Acute Kidney Injury Patho- Prerenal - ✓✓ANSWER✓✓>>- external to the kidneys

- reduce systemic circulation causing reduction in renal blood flow= decrease glomerular perfusion and filtration of kidneys

Acute Kidney Injury/ Acute Kidney Failure- what is it - ✓✓ANSWER✓✓>>- term used to encompass entire range of syndrome

- from slight deterioration of kidney function to severe impairment
- characterized by a rapid loss of kidney function
- this loss is accompanied by a rise in serum creatinine and or reduction in urine output
- can develop to progressive azotemia- accumulation of nitrogenous wastes in the blood
- although potentially reversible, high mortality rate
- most commonly, affects people with other life threatening conditions

Complications of transplantation list - ✓✓ANSWER✓✓>>- rejection

- infection
- CVD
- malignancies
- recurrence of original kidney disease
- corticosteroid related complications

Complications of transplantation- cardiovascular disease -

✓✓ANSWER✓✓>>- transplant recipients have increased incidence of atherosclerosis vascular disease

- hypertension, dyslipidemia SM rejection --> CV disease
- immunosuppressants can worsen hypertension and dyslipidemia

Complications of transplantation- corticosteroid complications -

✓✓ANSWER✓✓>>- aseptic necrosis of hips, knees and other joints can result from chronic corticosteroid therapy

- or peptic ulcer
- in first year after transplantation, corticosteroid doses are usually decreased 5-10mg/day
- many transplant programs have initiated corticosteroid free drug regimens because of problems

Complications of transplantation- infection - ✓✓ANSWER✓✓>>sig cause of dying after

- because of suppression of body's normal defense mechanisms by surgery, immunosuppressive drugs and effects of ESKD
- underlying illness like DM, malnutrition, older age can further complicate -
- most common observed in first month- pneumonia, wound infection, IV line drain infections, UTI
- fungal and viral are not uncommon because immunosuppressed state
- fungal difficult to treat
- viral- CMV, Epstein Barr, herpes
- CMV is one most common viral- if recipient has never had CMV and receives an organ from a donor with history CMV antiviral prophylaxis will be administered

Complications of transplantation- malignancies - ✓✓ANSWER✓✓>>-

greater than general population because immunosuppressive therapy

- most common basal squamous cell carcinoma of skin, Hodgkin's and NHL
- screening for cancer is important

Complications of transplantation- recurrence of original kidney disease -

✓✓ANSWER✓✓>>- occurs in some

- most common with glomerulonephritis, immunoglobulin A nephropathy, diabetic nephropathy
- must be advised it can happen

Complications of transplantation- rejection - ✓✓ANSWER✓✓>>- one of major problems

- can be acute or chronic
- should be put on transplant list hope can be retransplanted before dialysis is required

Continuous Ambulatory Peritoneal Dialysis- CAPD - ✓✓ANSWER✓✓>>- done while the patient is awake during the day

- exchanges are carried out manually by exchanging 1.5-3L of peritoneal dialysate at least 4x a day with dwell times emerging 4 hours
- disposable plastic tube
- in CAPD the bag and line can be disconnected after the instillation of fluid
- after the equilibration period, the line is reconnected to the catheter and the dialysate is drained from the peritoneal cavity, and a new 2-3L bag of dialysate is infused

Contraindications for kidney transplant - ✓✓ANSWER✓✓>>- disseminated malignancies

- refractory or untreated cardiac disease
- chronic respiratory failure
- extensive vascular disease
- chronic infection
- psychologic disorders- nonadherence of medical regimens, alcoholism, drug addiction
- at one time HIV people were denied opportunity, now centers have included HIV patients
- the presence of hepatitis B or C is NOT a contraindication

Note

- sometimes surgical procedures are required before transplantation- coronary artery bypass or angioplasty may be indicated etc.

\*in general, the recipient's own kidneys do not need to be removed before he or she receives transplant

Contraindications of PD her list - ✓✓ANSWER✓✓>>- history of multiple abdominal surgical procedures or severe abnormal pathology

- recurrent abdominal wall or inguinal hernias
- excessive obesity with large abdominal wall and fat deposits
- pre-existing vertebral disease- chronic back problems

- severe obstructive pulmonary disease

Acute Tubular Necrosis - ✓✓ANSWER✓✓>>= most common intrarenal cause of Aki and is primarily result of ischemia, nephrotoxins or sepsis

- severe kidney ischemia causes a disruption in the basement membrane and patchy destruction of the tubular epithelium
- nephrotoxic agents cause necrosis of tubular epithelial cells, which slough off and plug the tubules
- ATN is potentially reversible if the basement membrane is not destroyed and tubular epithelium regenerates
- ATN is most common cause of AKI for hospitalized patients

AKI Acute Intervention - ✓✓ANSWER✓✓>>- manage fluid and electrolyte balance during oliguric and diuretic phases

- observe and record I/O
- daily weights at the same time to detect gains or loss 1kg = 1000mL of fluid
- assess for s/s of hypervolemia in oliguric phase or hypovolemia in diuretic phase
- infection is the leading cause of death in AKI, aseptic technique is CRITICAL- protect patient- be alert for local manifestations of infection- swelling, redness pain, and systemic- fever, malice, but realize temp may NOT always be elevated
- patients with kidney failure have a blunted febrile response to an infection
- if antibiotics are used to treat the infection, dose and frequency must be considered because kidneys are primary route of excretion for many antibiotics
- perform skin care and mouth care to prevent stomatitis - painful swelling and sores in the mouth

AKI Care - ✓✓ANSWER✓✓>>-eliminate cause manage symptoms

- first step is to determine if there is adequate intravascular volume and cardiac output to ensure adequate perfusion to the kidneys
- diuretic therapy is often administered but NOT recommended in high doses
- usually loop diuretic- Lasix (act on ascending loop of Henle) or an osmotic diuretic- mannitol