

Pathology Flipped class group A

A hospitalized patient is given gentamicin for the treatment of peritonitis. Approximately one week after beginning treatment, the patient developed lethargy, oliguria, hyperventilation and hypertension. Lab work up showed electrolytes disturbances and metabolic acidosis. A urine sample showed microscopic hematuria and brown granular casts, but no bacteria. Gentamicin is withdrawn and the patient's renal symptoms soon improve.

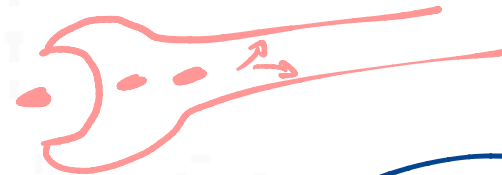
1. What is the appropriate diagnosis?

- (A) Renal cell carcinoma
- (B) Nephritic syndrome
- (C) Acute renal failure
- (D) Nephrotic syndrome

Gentamicin → 
AKI 

2- What is the basic anatomic unit of the kidney most responsible for this patient renal related disease?

- A) Glomeruli.
- B) Interstitium
- (C) Tubules
- D) The collecting system





3- What are the causes of this patient's oliguria?

4- Enumerate other nephrotoxic agents.

5- Enumerate the causes of enlarged kidney.

Causes of oliguria in ATN:

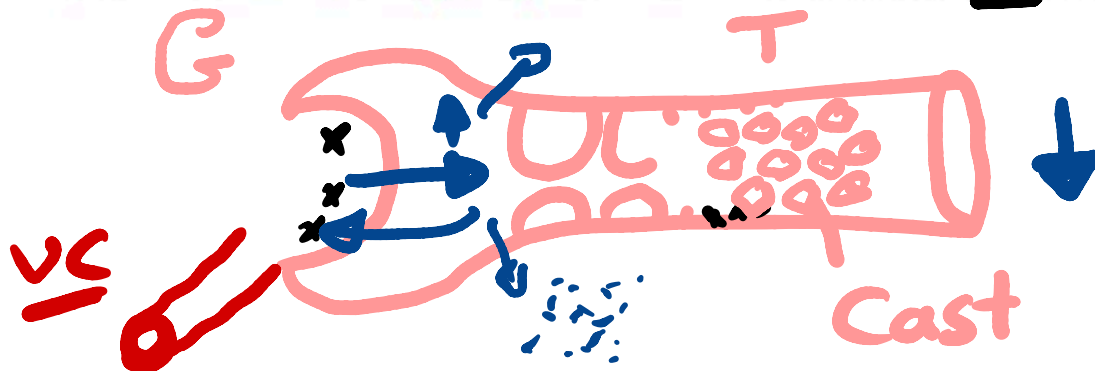
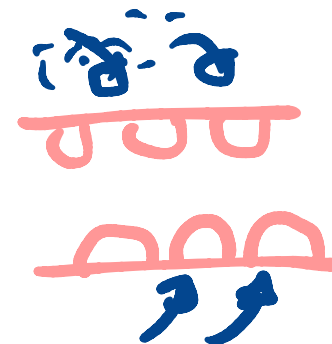
Both ischemia and toxins cause tubular and glomerular damage.

1- Tubular damage:

"RAS"

- Stimulates renin/angiotensin system → vasoconstriction → decreased GFR → Oliguria.
- Cast formation, as well as, tubular obstruction by necrotic epithelium → increase intra-tubular pressure → back pressure on glomeruli → decreased GFR → Oliguria.
- Back leak of tubular fluids → interstitial edema press on glomeruli and tubules → Oliguria.

2- Glomerular damage by toxins → decreased GFR & oliguria.



B- Toxic type: Drugs, poisons, organic solvents, irradiation and contrast media

تجميعه مهمه

CAUSES OF CONTRACTED KIDNEY:	CAUSES OF ENLARGED KIDNEY:
Hypoplastic kidney	Polycystic kidney.
Chronic glomerulonephritis	Acute diffuse GN, RPGN.
Vasculitis. Athrosclerosis. Benign nephrosclerosis.	Chronic venous congestion.
Late amyloidosis. Chronic pyelonephritis.	Hydronephrosis, Pyonephrosis Early amyloidosis
Senile kidney. Radiation nephritis.	Cloudy swelling. Fatty change.

Sym.

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RENAL VASCULAR DISEASES

MCQs: Choose the one most appropriate answer :

1. Causes of flea-bitten kidney include all the following EXCEPT

- A. Acute post-streptococcal GN.
- B. rapidly progressive GN.
- C. malignant nephrosclerosis .
- D. Benign nephrosclerosis.

2. All the following are common features of arteriole in malignant hypertension Except

- A-Fibrinoid necrosis.
- B-hyalinosis
- C-hyperplastic arteriosclerosis.
- D-Narrowing of the lumen

3. All the following are features of renal cortical necrosis Except

- A. Due to Toxemia of pregnancy
- B. Lead to acute renal failure
- C. Coagulative necrosis of the renal cortex
- D. Caseous necrosis of the renal cortex

~ T. B

4. Which of the following are gross features of benign nephrosclerosis except

- A. Cortical surface is granular ✓
- B. Capsule is adherent ✓
- C. Outer surface shows grooves and depression
- D. Kidney is contracted and symmetrical

5. which of the following is a feature of malignant nephrosclerosis

- A. Kidney is normal or slightly shrunken
- B. Capsule is thickened adherent
- C. Outer surface is lobulated and smooth
- D. Kidney is enlarged

↓
loose
T. B