QUIZ
10/11/2025

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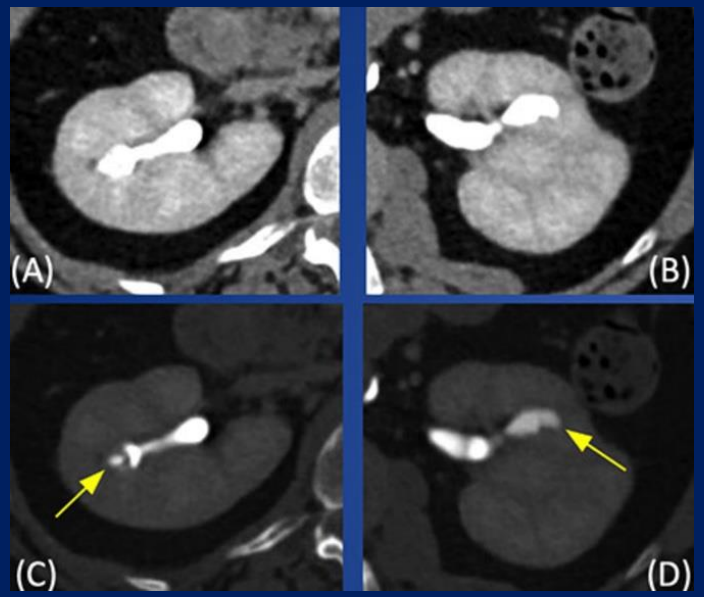
MOSC MedicalCollege, Kolenchery

60 year old female presented with hematuria and bilateral flank pain.This is her CT Urogram. Which classical sign of papillary necrosis is depicted here?



A.Lobster Claw sign
B.Ball on Tee sign
C.Signet ring sign
D.Bocquet of flowers sign

LOBSTER CLAW APPEARANCE

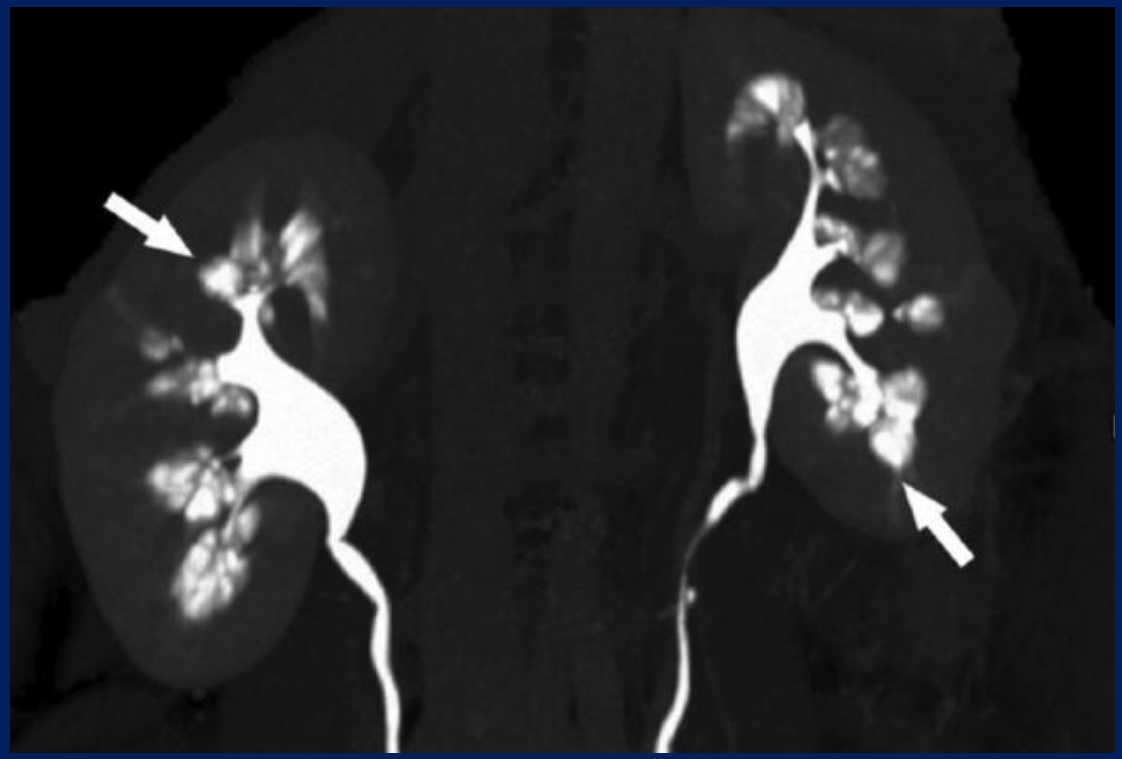
- In Papillary type, the entire papilla may necrose and slough
- Excavated cavity extending from calyx into necrotic papilla
- two curved contrast arms enclosing a central lucency (the necrosed papilla)

Answer : B Ball on Tee sign

Small extra calyceal collection of contrast in the region of papillae
Medullary type of papillary necrosis – central erosion of papillae- ball on tee
Dilated blunted upper pole calyx

- Signet ring sign
- Small contrast-filled depression in papillary tip- Early change

- Bocquet of flowers - - characteristic appearance in a medullary sponge kidney - microcalcifications in the ectatic distal collecting ducts



Winner Q NO 1

- Dr N.Khamini
- Final year nephrology resident
- Apollo hospitals Chennai

Q no : 2

A 50-year-old diabetic woman presents with fever, flank pain, and pyuria. Urinalysis shows pH 5.0, numerous WBC casts, and moderate proteinuria. Urine culture grows E. coli sensitive to ceftriaxone.

Which of the following best explains the acidic urine in this patient?

A. Ammonia generation by urease-producing bacteria

B. Impaired distal tubular secretion of hydrogen ions

C. Organic acid accumulation from bacterial metabolism

D. Suppression of urease activity by glucose in urine

- ## *Ans:* C. Organic acid accumulation from bacterial metabolism

E. coli, the most common cause of acute pyelonephritis, does not produce urease.

It metabolizes glucose and other substrates to organic acids, maintaining an acidic urine pH.

Acidic urine (pH < 6): seen with E. coli, Enterococcus, Staphylococcus saprophyticus, uric acid stones

- Alkaline urine typically indicates urease-positive organisms (Proteus, Klebsiella, Pseudomonas).
- Alkaline urine (pH > 7): seen with Proteus, Klebsiella, Pseudomonas → risk of struvite stones and chronic pyelonephritis.
- Chronic infection can evolve into renal scarring, RTA-like states, and nephrocalcinosis.\
- Tubular dysfunction may occur in chronic interstitial nephritis, not acute bacterial infection..
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Winner Q NO 2

- Dr Sunil kumar Behera
- 2nd year DM Nephrology Resident
- AIIMS Raipur

Thank You