ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Εθνικόν και Καποδιστριακόν Πανεπιστήμιον Αθηνών

Case Presentation

ΠΑΝΕΠΙΣΤΗΜΙΑΚΟ ΓΕΝΙΚΟ ΝΟΣΟΚΟΜΕΙΟ ATTIKON

Physician training in Nephrology
GOURDOUPARI EFTICHIA

Case Overview

32 y.o. female presents with:

- - 2 days of fever, dysuria, and left flank pain
- - Appears toxic: Temp 39.0°C, BP 100/50, HR 110
- - Mild suprapubic and left costo-verterbral angle tenderness
- - No edema

Initial Lab Findings

Laboratory Data	Result	Normal Range
Serum		
Na	140 mEq/L	135-145
K	4.7 mEq/L	3.5-5
Cl	104 mEq/L	100-111
Total CO2	22 mEq/L	24
BUN	15 mg/dL	4-15
Creatinine	0.8 mg/dL	0.6-1.0
Glucose	96 mg/dL	60-100
Whole blood		
WBC	22 x10^9/L	4.5-11.0
Hgb	12 gm/dL	13.5-17.5
Hct	36 %	41.0-53.0
Platelets	158 x10^9/L	150-440
Urine		
Specific gravity	1.018	1.002-1.036
Protein	1+	Negative
Blood	1+	Negative
Glucose	Negative	Negative

Initial Lab Findings

- Urine Sediment:
- - 25 WBCs/hpf
- - 10–15 monomorphic RBCs/hpf
- - Many bacteria

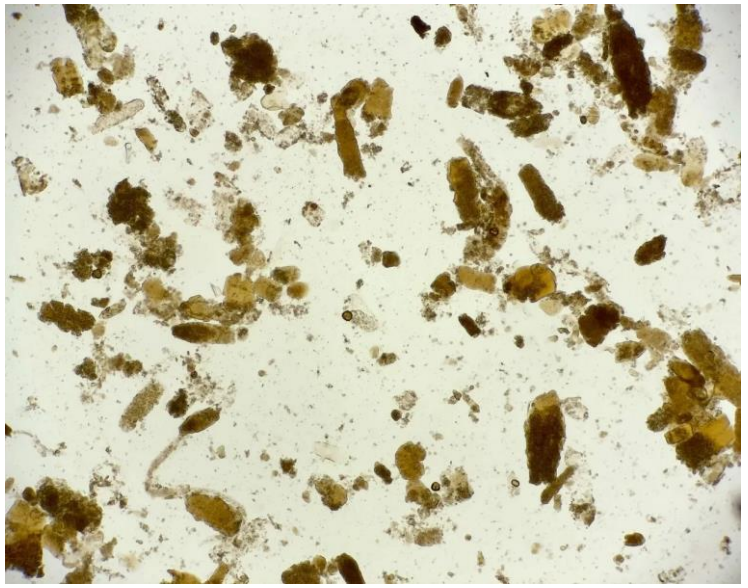
- Culture Results:
- - Urine: >100,000 colonies/ml E. coli
- - Blood: 2/2 positive for E. coli

Hospital Course & Treatment

- - Admitted with presumed pyelonephritis
- - Treated with IV ampicillin and gentamicin
- - Slow improvement, discharged on same IV antibiotics for 3 weeks

Follow-Up Visit (2 Weeks)

- - No fever, dysuria, or flank pain
- - Normal vitals and physical exam
- - Urinalysis: Numerous dark granular casts



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Question 1

Which additional studies would you order?

- a. Complete Blood Count
- b. Serum Electrolytes (Na, K, Cl, Total CO2)
- c. BUN, Creatinine
- d. Renal Ultrasound
- e. Urine Sodium
- f. Abdominal CT with contrast

Renal Ultrasound Findings

- - Normal kidney size (12 cm bilaterally)
- - Increased echogenicity
- - No hydronephrosis

Question 2

- What is your working diagnosis based on the case and findings?

acute tubular injury

Question 3

Which of the following is NOT a common cause?

- a. Aminoglycosides
- b. Iodinated contrast agents
- c. Myoglobin
- d. Penicillins

Question 4

The decline in renal function in ATN is typically abrupt (1–2 days) in all except:

- a. Massive rhabdomyolysis (crush injury)
- b. Contrast nephropathy
- c. Severe heavy metal poisoning
- d. Aminoglycoside administration

A histopathologic kidney specimen of a patient with aminoglycoside

nephrotoxicity is shown.