

# Hematuria

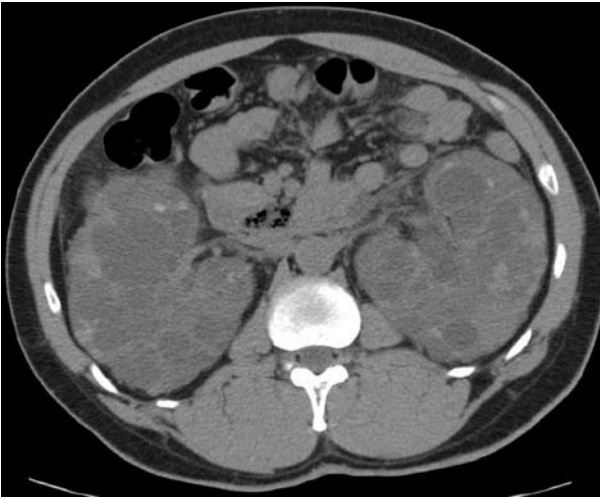
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This month's quiz is based on the article "Hematuria," which begins on page 20 of this issue. Choose the single best answer for each question.

1. A 20-year-old woman presents with a 2-week history of hematuria. She describes her urine as cola-colored in appearance. Urinalysis reveals many red blood cells (RBCs) per high-power field (hpf) and RBC casts. The RBCs appear dysmorphic. Which of the following is the most likely diagnosis?
  - (A) Cystitis
  - (B) Glomerulonephritis
  - (C) Nephrolithiasis
  - (D) Pyelonephritis
2. A 60-year-old man presents with a 1-month history of intermittent hematuria. He has a history of emphysema and reports a 40-pack-year history of smoking. He notices that the hematuria is most prominent at the end of urination and that the urine is bright red. The patient denies dysuria. Which of the following is the most likely diagnosis?
  - (A) Bladder cancer
  - (B) Glomerulonephritis
  - (C) Nephrolithiasis
  - (D) Pyelonephritis
3. A 70-year-old woman presents with a 2-day history of gross hematuria. She has a history of atrial fibrillation and hypertension. Current medications include warfarin 5 mg daily, amlodipine 10 mg daily, and aspirin 81 mg daily. She also reported an episode of epistaxis this morning. The patient denies dysuria or flank pain. Which of the following evaluations should be performed next?
  - (A) Computed tomography (CT) scan of the abdomen and pelvis
  - (B) Cystoscopy
  - (C) Prothrombin time with international normalized ratio
  - (D) Serum complement levels
4. A 25-year-old woman presents with right flank pain associated with gross hematuria. During the evaluation, she is writhing in pain trying to find a comfortable position. The patient denies fever. The physical examination reveals right flank tenderness. Urinalysis reveals 20 RBCs/hpf that are normal in appearance. Urinalysis is negative for white blood cells and bacteria. Which of the following is the most likely diagnosis?
  - (A) Cystitis
  - (B) Glomerulonephritis
  - (C) Nephrolithiasis
  - (D) Pyelonephritis
5. A 30-year-old man presents with right flank pain associated with gross hematuria. The physical examination reveals costovertebral angle tenderness. Urinalysis reveals 40 RBCs/hpf. A plain radiograph of the abdomen and pelvis is normal. An intravenous pyelogram reveals a 2-cm object in the right renal pelvis. The stone is most likely composed of which of the following?
  - (A) Calcium
  - (B) Cystine
  - (C) Struvite
  - (D) Uric acid
6. A 25-year-old woman presents with episodes of flank pain and gross hematuria. Physical examination reveals a blood pressure of 150/100 mm Hg. Palpable bilateral flank masses are noted. Family history is significant for a father with end-stage renal disease. CT scan of the abdomen is shown in the **Figure**. Which of the following is the most likely diagnosis?
  - (A) Alport's syndrome
  - (B) Polycystic kidney disease
  - (C) Renal cell carcinoma
  - (D) Thin basement membrane disease

For answers, see page 61.

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**Figure.** Computed tomography scan of the abdomen of the patient referred to in question 6.

7. A 16-year-old girl presents with episodes of dark cola-colored urine. She reports having had an upper respiratory infection with cough and myalgias approximately 1 week prior to the hematuria episode. The patient denies having had a sore throat at any time. The upper respiratory infection resolved spontaneously. Physical examination is normal. Urinalysis shows many dysmorphic RBCs. Which of the following is the most likely diagnosis?
- (A) Alport's syndrome
  - (B) Henoch-Schönlein purpura
  - (C) IgA nephropathy
  - (D) Poststreptococcal glomerulonephritis
8. A 15-year-old boy presents with acute onset of edema and hematuria. Approximately 3 weeks ago, he was treated for pharyngitis, and exudates on his tonsils were noted at that time. Since then, the patient has felt well but 1 week ago he noted the onset of dark, cola-colored urine and swelling of his legs. On physical examination, blood pressure is 140/95 mm Hg and there is marked peripheral edema. Which of the following is the most likely diagnosis?
- (A) Alport's syndrome
  - (B) Henoch-Schönlein purpura
  - (C) IgA nephropathy
  - (D) Poststreptococcal glomerulonephritis

**Answers to the Clinical Review Quiz, which appears on page 51. The article on hematuria begins on page 20.**

1. (B) Glomerulonephritis
2. (A) Bladder cancer
3. (C) Prothrombin time with international normalized ratio
4. (C) Nephrolithiasis
5. (D) Uric acid
6. (B) Polycystic kidney disease
7. (C) IgA nephropathy
8. (D) Poststreptococcal glomerulonephritis

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