Acute Bilateral Renal Cortical Necrosis Complicating Pyomyoma

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Key words: renal cortical necrosis, acute renal failure, acute tubular necrosis, pyomyoma

(Inter Med 49: 511-512, 2010)

(DOI: 10.2169/internalmedicine.49.3184)

Picture 1A. A contrast-enhanced computed tomography (CT) scan of the abdomen showed a large cystic mass with ring enhancement originated from uterus.

Picture 1B. The CT scan showed lack of bilateral renal cortical enhancement sparing thin rim of subcapsular cortex, juxtamedullary and medullary areas, characteristic findings of renal cortical necrosis.

A 51-year-old woman was admitted to our hospital complaining of worsening fever, chills, and low back pain over the previous 6 hours. Vital signs showed temperature of 38.3 °C, pulse rate of 120 beats per minute, blood pressure of 140/72 mmHg, and respiratory rate of 24 per minute. Physical examination revealed a large mass occupying the middle and lower portions of the abdomen, which had been diagnosed as uterine myoma one month before. Blood tests on admission revealed that her white cell count was 15,900/ μ L with left shift, C-reactive protein was 13.1 mg/dL, and serum creatinine level was 0.71 mg/dL. The patient became anuric on the day of admission.

A contrast-enhanced computed tomography (CT) scan of the abdomen was performed to investigate a focus of infection. The CT scan showed a large cystic mass with ring enhancement originating from the uterus, suggesting pyomyoma, a fatal complication of uterine myoma (Picture 1A).

The CT scan also showed diffuse and bilateral cortical hypodense areas surrounded by capsular enhancement in both kidneys, diagnostic finding of bilateral renal cortical necrosis (Picture 1B).

Total hysterectomy was performed on the 3rd day of admission. Gram stain of the abscess contents revealed numerous white blood cells and gram-negative rods, but culture of the abscess contents showed no growth, probably due to prior use of antibiotics. General improvement was noted after surgery. Her daily urine output has increased up to 500 to 750 ml, but she remained dialysis-dependent.

Bilateral acute renal cortical necrosis is a rare but severe form of acute tubular necrosis characterized by necrosis of the renal cortex but sparing of the medulla. It accounts for only 2-4% cases of acute renal failure in western countries (1, 2). It is usually associated with obstetric complication, but other disorders, such as poisoning, acute pancreati-

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Received for publication November 24, 2009; Accepted for publication November 25, 2009

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tis, or sepsis can also cause it (2). Massive bilateral renal cortical necrosis typically occurs in the setting of hypovolemia and endotoxic shock. Dialysis is required in most survivors (2).

The diagnosis is best made by CT scan, especially during

the initial phase of the disease. The characteristic finding is the lack of renal cortical enhancement sparing thin rim of the subcapsular cortex, juxtamedullary and medullary areas (3).

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