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**A case of acute pyelonephritis with acute kidney injury caused by  
Enterococcus hirae in male patient with benign prostate hyperplasia**

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**Case Study:** Enterococcus hirae, member of the Enterococcus genus known to cause infections mainly in animals and birds, but is rarely encountered in human infection. A few cases of acute pyelonephritis caused by Enterococcus hirae were reported before; however, there were no report of development of acute kidney injury in those cases. We report the first case of acute pyelonephritis with acute kidney injury by E. hirae in patient with benign prostate hyperplasia.

A 71-year-old Korean man with a history of benign prostate hyperplasia was admitted to our hospital for evaluation of fever and abdominal pain. He had a 1-year history of benign prostate hyperplasia and had not taken medication. Laboratory tests showed leukocytosis ( $17.3 \times 10^3/\text{mL}$ ) and pyuria. The blood urea nitrogen and serum creatinine concentrations were 21 mg/dL (reference: 8-20 mg/dL) and 1.6 mg/dL (reference: 0.6-1.2 mg/dL), respectively. His serum creatinine concentration six months earlier was 0.9 mg/dL. The prostate specific antigen level was 6.49 ng/mL (reference: 0-4 ng/mL). An unenhanced computed tomography of the abdomen showed urothelial thickening of left renal pelvis, suggestive of acute pyelonephritis. Antibiotics treatment using cefotaxime (third-generation cephalosporin) was administered for a presumed diagnosis of APN. The next catch urine cultures obtained on admission grew Enterococcus hirae susceptible to ampicillin, penicillin and gentamycin. Thus, cefotaxime was switched to ampicillin/sulbactam considering the result of susceptibility, then the patient's fever subsided. Even though inflammatory markers such as CRP and white blood cell count improved, he complained epigastric pain. Therefore, he underwent gastroscopy, which revealed duodenal ulcer. Upon identification of the Enterococcus hirae a more detailed epidemiological interview was conducted. His job is farmer and mentioned having had contact with farm animals such as hen and dogs. In addition, he also had lived with a puppy at home. On day 16, he was discharged with normal renal function.