

Letter to the Editor

Polymicrobial Peritonitis with *Leclercia adecarboxylata* in a Peritoneal Dialysis Patient

To the Editor,

Peritoneal dialysis (PD)-related infection is the most common and serious complication of PD patients and the most common reason for switching to hemodialysis. Although most of PD peritonitis episodes are attributed to a single organism, multiple organisms are identified in nearly 10% of peritonitis cases.¹ *Leclercia adecarboxylata* is a rare cause of PD-related peritonitis. In this report, we describe the case of PD-related polymicrobial peritonitis with *L. adecarboxylata*.

A 72-year-old female with end-stage renal failure due to chronic glomerulonephritis had been on continuous ambulatory PD for 12 years. She was admitted to the hospital with fever, nausea, vomiting, abdominal pain, and cloudy dialysate. On physical examination, blood pressure was 90/60 mm Hg and body temperature was 38.8°C. Abdominal examination revealed diffuse tenderness with rebounding. The dialysis effluent was turbid. The white cell count of dialysate was above 10,000/μL. Laboratory data showed normal leukocyte number (4.600/μL) with 86% polymorphonuclear cells, high C-reactive protein [135 mg/L (normal: 0–5)], and high procalcitonin [63 ng/mL (normal: 0–0.5)] levels. After hospitalization, blood and peritoneal fluid cultures were taken. Empirical antibiotic treatment with intraperitoneal cefuroxime and oral ciprofloxacin was started. The peritoneal fluid culture yielded Gram-negative rods, later iden-

tified as *Acinetobacter baumannii*, *Klebsiella pneumoniae*, and *L. adecarboxylata*. Cefuroxime and ciprofloxacin were discontinued, and intravenous imipenem was started according to the antibiogram. After three weeks of therapy, her peritonitis completely resolved. The PD catheter was not removed. There was no relapse of peritonitis upon follow-up.

L. adecarboxylata is a member of *Enterobacteriaceae* family. It is a ubiquitous, motile, Gram-negative rod, which can be identified with advances in DNA hybridization techniques in clinical specimens.² Even though there are a lot of cases of *Acinetobacter* and *Klebsiella* peritonitis in the literature, data on *Leclercia* peritonitis are scant.^{2,4} Immunosuppression and break in sterility are the major risk factors for *Leclercia* infections. According to a recently published case report, contamination with raw meat and cassette rupture were found as responsible factors for *Leclercia* peritonitis in an PD patient.³ However, we did not find any predisposing factors other than immunosuppression due to uremic milieu in our patient.

The majority of cases which were caused by *L. adecarboxylata* infection are relatively non-life threatening and susceptible to most antibiotics. The clinical significance of *L. adecarboxylata* in polymicrobial infections is unclear and usually can be found as less virulent than coexisting pathogenic bacteria similar in our case.

In conclusion, to the best of our knowledge,

this is the first report of polymicrobial peritonitis with *L. adecarboxylata*. However, we do not know the exact epidemiology of *L. adecarboxylata* infections because of the paucity of reports. Usage of appropriate microbiologic techniques might increase the prevalence of rare microorganisms such as *L. adecarboxylata* as a cause of peritonitis in patients with PD.

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