

Key Insights Into Peritoneal Dialysis-Associated Peritonitis in 2023: A Single-Center Study

Aistė Bagdonavičiūtė¹, Laurynas Rimševičius², Marius Miglinas², Diana Sukackienė², Dalia Šimeliūnaitė²

¹Vilnius University Faculty of Medicine

²Clinic of Gastroenterology, Nephro-Urology and Surgery

Abstract

Peritoneal dialysis (PD) - treatment for end-stage kidney disease that helps eliminate waste products from the blood due to ineffective kidney function. We report a retrospective data analysis of 38 PD patients treated at a single-center dialysis unit in 2023. The incidence of peritonitis was 47.37% in women and 52.63% in men. There were 15 cases of PD-associated peritonitis in 12 patients (31.58%). All patients had a history of hypertensive heart disease. Total hospitalization for peritonitis patients was 266 days. The overall incidence of peritonitis was 1 case per 26 patient-months. In 73.33% of cases, the outcome was recovery and continuation of PD treatment, and in 26.67% of cases, treatment was changed to haemodialysis. In 25% of patients, peritonitis recurred on average after 1.7 months. The rarest causative agent (5%) was fungal pathogens, and the most common (74%) was G+ microorganisms, predominantly *Staphylococcus aureus* (37%), slightly rarer were *Staphylococcus epidermidis* and *Streptococcus mitis*. In 53% of cases, cefazolin was combined with ceftazidime for initial treatment, with vancomycin added 26.7% of cases, and treatment was switched to another antimicrobial agent in 33.33% of cases. Due to the small sample size, no single factor was identified as statistically significant in the development of peritonitis. Correlations were observed between the probability of developing peritonitis: weak negative with age ($r=-0.0915$), weak positive with duration of treatment ($r=0.1416$) and albumin level in the blood ($r=0.157928672$). In conclusion, peritonitis is caused by a variety of pathogens, with different treatments and risk factors.