Abstract Type : Poster exhibition
Abstract Submission No.: A-0090
Abstract Topic : Dialysis

Impact of Pet Ownership in Causative Organisms of Peritoneal Dialysis-Related Infections: An 8-Year Single-Center Experience

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Objectives : Peritoneal dialysis (PD) provides flexibility for end-stage kidney disease patients but carries an infection risk due to catheter insertion. With rising pet ownership, concerns regarding pet-related infections during PD have increased. This study retrospectively analyzed the impact of pet ownership on PD-related infections.
Methods : A total of 162 PD patients treated at Soonchunhyang University Cheonan Hospital from 2016 to 2023 were reviewed. Patients were categorized based on pet ownership and type (dog or cat) using data from PD nurse home visits. Among the 25 pet owners, 16 owned dogs, and 9 owned cats. Peritonitis, exit-site infections (ESI), and tunnel infections (TI) were defined according to the International Society of Peritoneal Dialysis (ISPD) guidelines. Detailed data were collected on causative organisms, catheter removal events, and mortality outcomes.
Results : There was no significant difference between the incidence of peritonitis or ESI in PD patients with and without pets. Pet ownership was not notably associated with mortality or catheter removal events. However, an analysis of peritonitis cases identified infections caused by zoonotic microorganisms, including Pasteurella dagmatis and Pantoea agglomerans. Additionally, pet owners had higher frequencies of polymicrobial infections (77.8% vs. 32.4%, $p = 0.008$) and Staphylococcus infections (55.6% vs. 16.2%, $p = 0.006$) in ESI compared to non-pet owners. Furthermore, 33.3% of TI cases were observed in pet owners, with one requiring catheter reoperation.
Conclusions : This study investigated the impact of pet ownership on PD-related infections. Considering that pet ownership can enhance emotional stability and improve quality of life, this study suggests that patients should focus on maintaining hygiene and preventing injuries rather than restricting pet ownership. Further research is necessary to elucidate the relationship between pet ownership and PD-related infections.