Downloaded from https://academic.oup.com/ndt/article/34/Supplement_1/gfz103.SP496/5515558 by guest on 09 April 2024

SP496 **RISK FACTORS ASSOCIATED WITH PERITONEAL DIALYSIS CATHETER SURVIVAL: A SINGLE-CENTER COHORT STUDY**

Ana Messias[1], Filipa Cardoso[1], Fernando Caeiro[1], Vasco Fernandes[1], Ana Carina Ferreira[1], Fernando Nolasco[1]

[1]*Hospital Curry Cabral, CHULC, Lisbon, Portugal*

INTRODUCTION: Peritoneal dialysis (PD) is an effective, convenient and less costly modality of renal replacement therapy for end-stage renal disease patients. A functioning PD catheter is essential for a successful treatment. The majority of studies until now evaluated the factors influencing dialysis success, whereas data on the factors affecting catheter survival are scant. The aim of this study is to assess the PD catheter outcomes at our center, in order to determine factors associated with 1-year catheter failure.

METHODS: Retrospective analysis of 181 patients who had their first PD catheter placed between June 2007 and December 2018. Demographic and clinical patients' characteristics were evaluated, as well as the type of PD catheter placement, mechanical dysfunction and infectious complications. PD catheter failure was defined as removal due to catheter-related complications. Uni- and multivariate analysis (t-test and logistic regression) and survival analysis (cox proportional hazards model) were performed.

RESULTS: A total of 230 PD catheter insertions were performed in 181 patients during the study period. Patients were followed for a median of 16 (6 – 32) months. The mean age at the time of catheter placement was 52 $\pm$ 17 years and 54.7% (99) were men. The mean body mass index (BMI) was 24 $\pm$ 4 Kg/m2 and 31% had a history of abdominal surgery prior to DP catheter insertion. 27% (49 patients) had diabetes mellitus. Only 5% (9 patients) had autosomal dominant polycystic kidney disease. 135 PD catheters were percutaneously placed (58.7%). The remaining 95 PD catheters were surgically placed. At the end of follow-up, 33% (76) DP catheters were removed due to infection (37), mechanical dysfunction (35) and development of peritoneal leaks (4). One-year catheter survival, censored for death, transplant and lack of adequacy/compliance, was 77.5% (178 catheters). In a univariate analysis, a shorter time until first infection, mechanical dysfunction and late infections were statistically associated with PD catheter failure before 12 months ($p<0.001$). Previous attempts to create a vascular

access showed a tendency for a better PD catheter survival at 12 months (p=0.06). PD catheter failure before 12 months was not associated with type of insertion (percutaneous vs surgical). Neither early infections (before 4 weeks after placement) nor peritoneal leaks were associated with worse survival rate. No significant association was observed between catheter survival and other risk factors including age, BMI, diabetic status and previous abdominal surgeries. In a survival analysis, worst catheter survival was associated with the early use (before 2 weeks after placement) of PD catheter (HR 4.3, 2.3 – 7.9; p<0.001), development of peritoneal leaks (HR 2.2, 1.01 – 5; p=0.047) and percutaneous PD catheter placement (HR 2.1, 1.08 – 4; p=0.027). In a multivariate analysis only the early use was a predictor of worst PD catheter survival (HR 3.8, 2.2 – 7.2, p<0.001).

CONCLUSIONS: Although PD catheter-related infections were significantly associated with catheter failure in our cohort, our outcomes are similar to those described in the literature. Other factors such as BMI, diabetes and previous abdominal surgery were not found to affect the PD catheter survival and should not be considered barriers to PD initiation.

Downloaded from https://academic.oup.com/ndt/article/34/Supplement_1/gfz103.SP496/5515558 by guest on 09 April 2024