

Different Outcome of Percutaneous Peritoneal Catheter Placement by Nephrologists with a Trocar vs. Seldinger: Experience Of Two Brazilian Centres

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Introduction

- A good catheter implantation technique is important to allow effective peritoneal access function and long-term technique survival. Studies regarding results obtained by nephrologists using different techniques have been limited.

Objective

- The aim of this study was to investigate the rate of early catheter-related complications and catheter survival in two Brazilian centres, for two different percutaneous methods of catheter implantation performed by the nephrologist team.

Methods

- Adult incident patients recruited from January 2006 to July 2013 who had undergone first peritoneal dialysis (PD) catheter implantation were included in the analysis. Early rates of mechanical and infectious complications were defined as time to the first event occurring up to 3 months.

Results

- Four hundred and forty-five consecutive Tenckhoff catheters were implanted by the nephrologist team percutaneously after antibiotic prophylaxis in an operating room: trocar was used in 349 (78.4%) and the Seldinger technique (S) in 99 (21.6%).
- The Seldinger technique was significantly associated with a lower rate of leaks (16.3 vs. 3%, $p=0.03$) and tip catheter migration (22.6 vs. 10.1%, $p=0.04$), while early rates of infectious complication were similar between the two groups ($p=0.59$).
- Long-term catheter survival was higher in the Seldinger group (log-rank $p=0.031$). By Cox multivariate analysis, adjusted for age, sex, and diabetes, the Seldinger technique remained independently associated with better catheter survival (HR 0.681 [confidence interval 0.462-0.910], $p=0.04$).

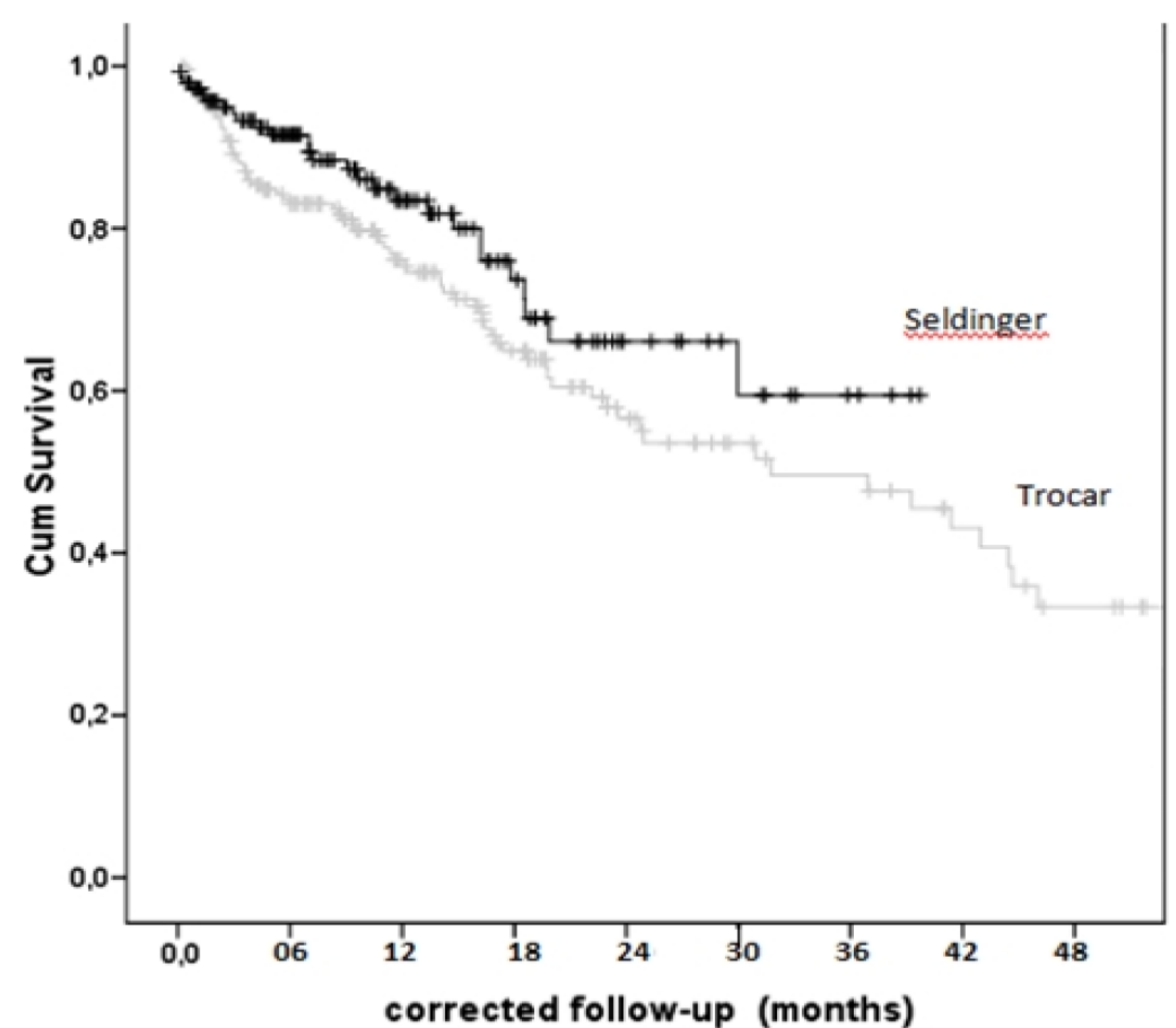
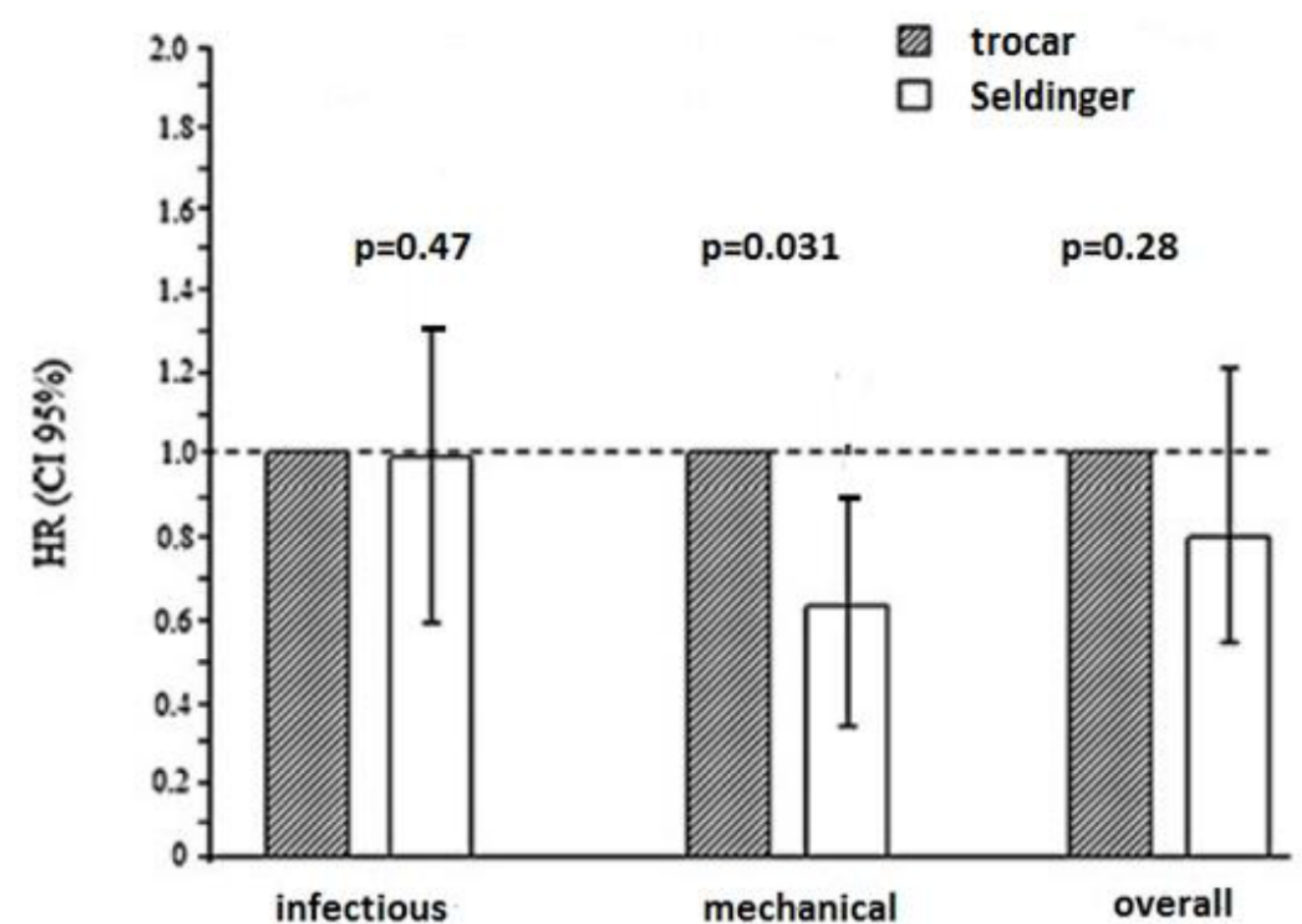


Figure 2 – Comparative analysis after correction for age, sex, body index mass and diabetes (log-rank $p=0.04$).

Conclusion

- Our experience showed better PD outcomes with the Seldinger technique than the trocar method of catheter implantation by nephrologists.