INTRODUCTION AND AIMS: Good peritoneal catheter function is essential to the success of peritoneal dialysis treatment. Laparoscopic insertion of the catheter is widely used. Modified laparoscopic technique of catheter placement with pelvis fixation has been published as a safe procedure without any significant prolongation of operation time.

METHODS: 42 straight Tenckhoff catheters were placed in 39 consecutive patients with ESRD from November 2011 to March 2017. Thirty-three catheters were placed using modified technique (group 1). The technique consists of laparoscopically-guided intra-abdominal fixation of the catheter tip at one point by using suture passer hernia forceps. Nine catheter were placed laparoscopically without fixation (group 2). The same surgeon performed all operations. Till October 2017 the information was collected and analyzed including sex, age, co-morbidity with diabetes, duration of catheter use and risk of catheter migration.

RESULTS: The mean follow-up period was 21.7 +/- 15.5 months in group 1 and 30.3 +/- 19.8 months in group 2. None of the patients developed serious complications during surgery or the postoperative period. When necessary, no problem with catheter extraction was observed during and after the procedure, both in elective and emergency settings. There were no significant difference between the groups in terms of age, sex, diabetes and catheter survival. There was a much greater risk of catheter malposition in the group of the patients operated without tip fixation, OR 9.663 (while p-value was not significant, most probably due to the considerable difference in the number of patient per group).

CONCLUSIONS: Modified laparoscopic placement of a peritoneal dialysis catheter with intra-abdominal fixation is a safe procedure in terms of catheter insertion and extraction and really prevents catheter malfunction due to tip migration. If the patient is a candidate for laparoscopic catheter placement we suggest that the modified procedure be preferred.