

## Peritoneal Dialysis Catheter Insertion under Local Anaesthesia: A Single Centre Tertiary Care Renal Unit Experience.

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Title:- Peritoneal Dialysis Catheter Insertion under Local Anaesthesia: A Single Centre Tertiary Care Renal Unit Experience

**Objectives:-** Peritoneal dialysis [PD] is one of the modalities of renal replacement therapy [RRT]. A Tenckhoff catheter is inserted into the peritoneal space to deliver PD. Patients with previous abdominal surgery are at risk of having adhesions. In such patients, the procedure is traditionally performed by a surgically assisted PD catheter [SAPDCI] insertion technique under general anaesthesia [GA]. Patients often have large abdominal scars and are required to stay overnight due to prolonged recovery time. Moreover, these patients have significant cardiac morbidities and are usually not suitable or are at a higher risk of having GA. We share the outcomes of inserting percutaneous PD catheter insertion under local anaesthesia [LAPDCI] and light sedation in comparison to SAPDCI.

**Methods:-** Our unit uses a coiled tenckhoff catheter [KIMAL] for SAPDCI & LAPDCI. All patients received prophylactic iv vancomycin 1hr prior to the procedure. LAPDCI group received anti-emetics, iv fentanyl 50 mcg +/- midazolam 1mg during the procedure. SAPDCI group received GA. All patients received the same aftercare and training from the PD unit/staff. Data were retrospectively collected from April 2017 to April 2018 from the hospital patient electronic records, PD unit notes and analysed using Microsoft excel 2010.

**Results:-** A total of 86 catheters were inserted in 83 patients [male (M): female (F):: 47:36]. 73% (n=63; M: F:: 38:25) were LAPDCI vs 27% (n=23; M:F::9:11) were SAPDCI insertions. 35% (n=29) have diabetes. 23 of the LAPDCI vs 9 of the SAPDCI are still in use. Duration of catheter days in those who had the catheter removed: LAPDCI [mean - 232.7, median - 140.8; SD – 196.4] vs SAPDCI [mean -181.7, median – 196.9, SD – 84.7]. 43% [27] of LAPDCI vs 83% [19] of SAPDCI were patients with previous abdominal surgery. 25 patients from LAPDCI vs 5 from the SAPDCI group were switched to haemodialysis. Five patients in LAPDCI vs one in SAPDCI group received renal transplantation. Two patients in the SAPDCI group had successful LAPDCI; however, only one patient from LAPDCI needed SAPDCI. Peritonitis after 6 months of catheter insertion was noted in 27% cases [n=17] of LAPDCI vs 13% [n=3] in SAPDCI group. There was no procedure-related complication and injury to the viscera in either of the groups.

**Conclusions:-** LAPDCI in this unit is physician-led. Previous abdominal surgery can lead to peritoneal adhesions and such patients often require SAPDCI. In our unit, LAPDCI is performed under ultrasound and fluoroscopy guidance to assist in needling the peritoneum and satisfactory placement of the catheter. In our cohort, a significant number (43%) of patients who underwent LAPDCI had previous abdominal surgeries. There was no significant difference in the complications. LAPDCI insertion is a safe and effective way of providing definitive access for PD in those with previous abdominal surgeries. It is cost-effective, spares surgical and theatre time for more complex procedures. It improves patient satisfaction by reducing patient stay and avoiding the risk of GA.