



PERITONEAL CATHETER INSERTION: PRE-PERITONEAL TUNNELING IN LAPAROSCOPIC TECHNIQUE A SINGLE CENTRE EXPERIENCE

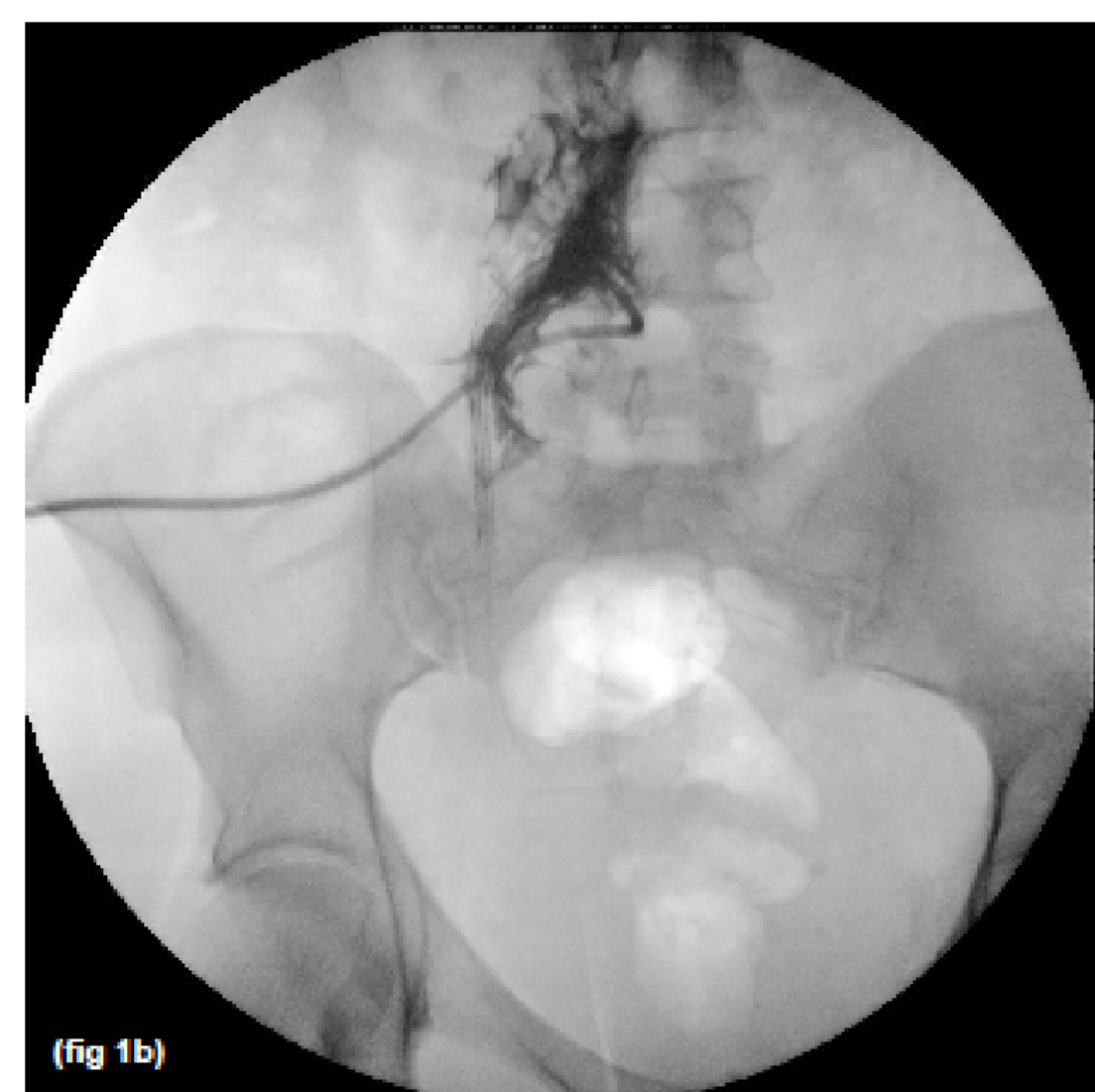
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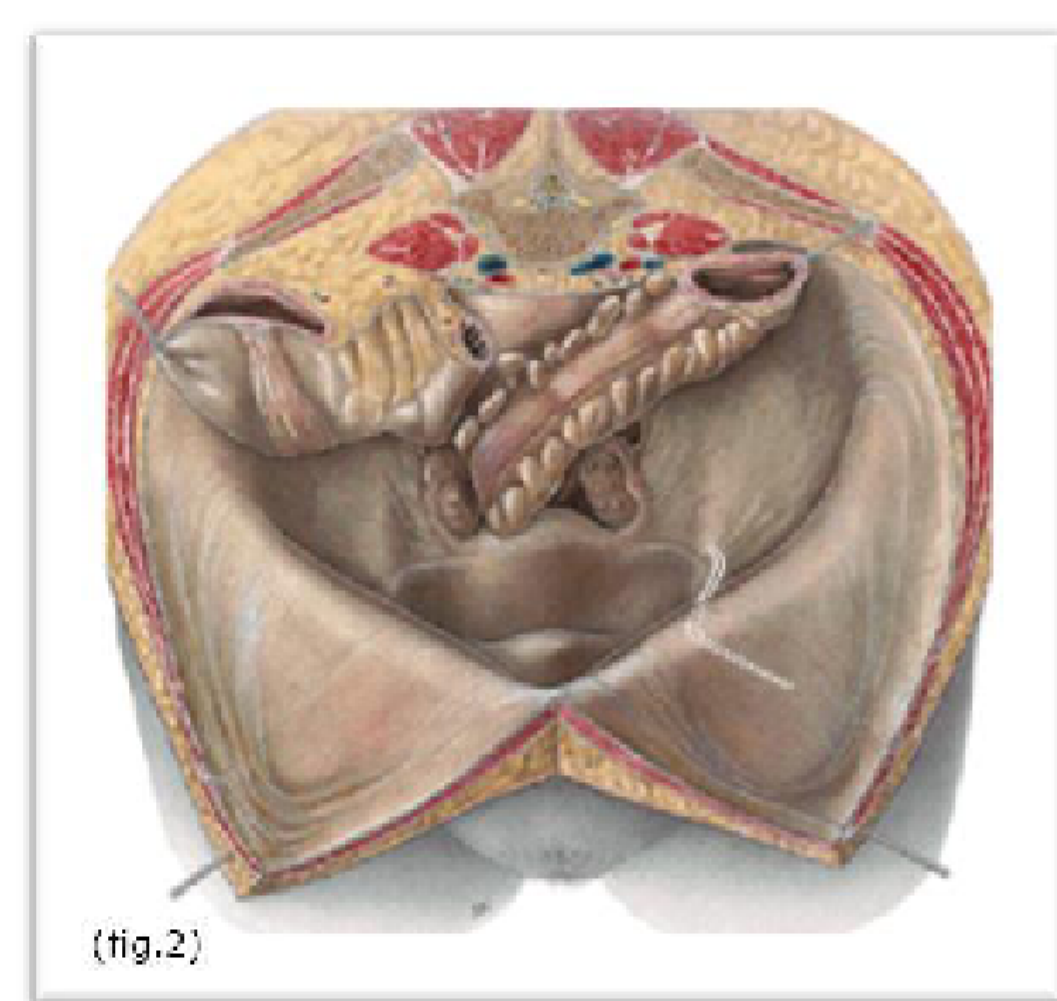
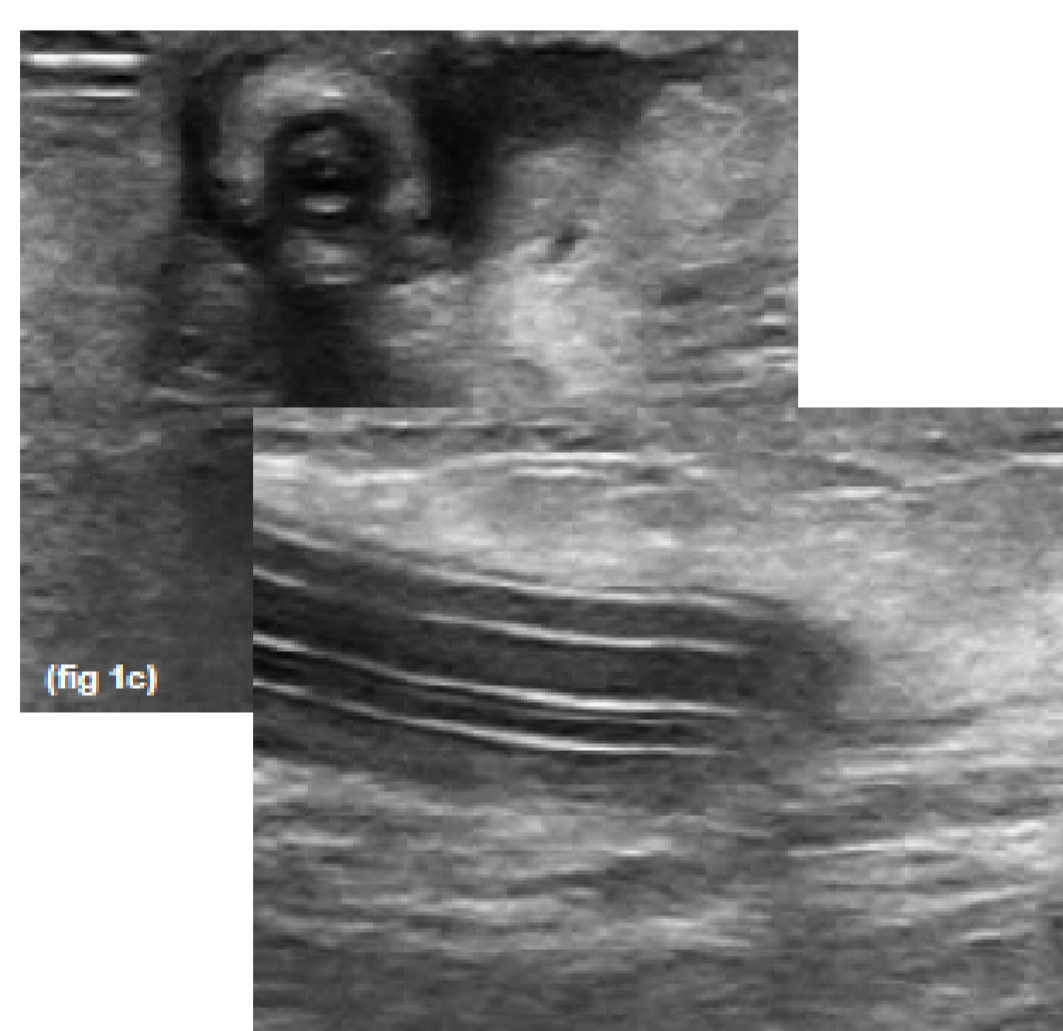
Overall, survival of incident end-stage renal disease patients is similar for CHD and peritoneal dialysis, but early survival differences may be driven by selection bias. Decisions regarding modality choice should be individualized, considering other important outcomes including quality of life^{1,2,3}. PD is not devoid of complications, distinguishable in clinics, mechanicals and infectious, but if recognized all early can be treated allowing the continuation of therapy avoiding drop out in HD how would our patients

Introduction: peritoneal catheter dislocation is an occurrence of Peritoneal Dialysis linked to intra-abdominal displacement that prevents the proper functioning in the fluid discharge phase. It's a process which can also occur in the period just after the insertion and it is described between the PD' mechanical complications.

Report three cases in terms of clinical conditions and catheter disfunction causes in which laparoscopy surgical tech (LPS) with cath pre-peritoneal tunneling was proposed as alternative to laparotomy classical tech (LPT) in all cases proposed.



1. 'PD motivation': young woman 48 years old, suffering from ESRD due to tubulointerstitial nephropathy to diuretics and NSAIDs abuse. 1st aid: peritoneal cath insertion with LPT technique. Verified the correct positions of the tube in 1st surgical day with conventional abdomen X-ray (fig. 1a) it was documented obstruction cath by contrastographic examination (fig. 1b). 2nd operation: LPS displayed distal end cath dislocation in the sub-diaphragmatic area and omentum wrapped. Total omentectomy and tube debridement which has been pegged to the round ligament. After three months there was still a functional defect in drainage phase that X-ray abdomen was again deployed. 3rd operation: LPS, the parietal peritoneum was pierced with laparoscopic instrument from 10 cm to Douglas' cable and pre-peritoneal tunneled in pre-peritoneal position with perforated section free in abdomen (Fig. 2). The patient had no more disfunction episodes, APD has performed regularly for 12 months and was later transplanted. The tube removal during kidney transplant was smooth and didn't present greater difficulties than extraction of the same placed with LPT tech.



2. 'classic script with new resolution': young male 55 years old suffering from ESRD due to HIV nephropathy, two years APD age. Evidence infection signs studied by tunnel US examination (collection of anechoic and corpuscular area around the profound cuff, both in longitudinal and cross sectional study) (fig. 1c). Recurrent ES infection from St. Aureus complicated with tunnel infection and peritonitis from the same germ. After 2 weeks of antibiotic treatment with ES and peritoneum sterilization, patient was subjected to two-fold steps in LPS: peritoneal cath removal and new tube inserted on the other side again by means of pre-peritoneal tunneling (fig. 2). Patient is currently being APD and from 8 months is waiting for a kidney transplant. No recorded mechanical and infective complications.

ASA classification according to ARMSTRONG ⁽²⁾	
I.	Healthy patient;
II.	Mild systemic disease, patient in use of drugs;
III.	Severe systemic disease with definite functional limitation, not incapacitating, controlled by drugs;
IV.	Severe systemic disease, with constant threat to life, incapacitating;
V.	Moribund patient, unlikely to survive 24 hours.
Observation: Add E for emergency cases.	

FIGURE 1 – Classification of physical status by the American Society of Anesthesiologists

3. 'the novelty at first': two old men, aged respectively 72 and 87 years old, both with CRF secondary to nephroangiosclerosis. In both cases, it was necessary to define the surgical chance than the opportunity to practice general anesthesia. Obtained it, both patients were subjected to the same surgical procedure in LPS with tube insertion and always fixing by pre-peritoneal tunneling. ASA score was 3 for the first patient and 4 for the second. In both cases it was possible tread with LPS practicing general anesthesia without surgery complications intraoperative and in the immediately following.

RESULTS	ASA score	antibiotic premedication	days of hospitalization	pain control (NRS scale)	Leak and surgical complications	ES infection and peritonitis	Starting day on CAPD	Load volume on CAPD	CAPD full dose
1st case	3	Vancomycin 1g IV 2 hours early	3	3 Treated with paracetamol 1g	none	none	2	1500 cc for exchange	4 Exchanges, 2 liter load, 7 days to week
2nd case	3	Vancomycin 1g IV 2 hours early	3	3 Treated with paracetamol 1g	none	none	2	1500 cc for exchange	4 Exchanges, 2 liter load, 7 days to week
3rd case	3-4	Vancomycin 1g IV 2 hours early	3	3 Treated with paracetamol 1g	none	none	2	1500 cc for exchange	4 Exchanges, 2 liter load, 7 days to week

Conclusion: LPS technique in all cases has been shown better than laparotomy technique not only to the tube fixation in correct position, but also to study the peritoneum anatomy and where necessary practice a partial or total omentectomy in order to prevent other instances of cath dislodgement. The low rate of hospitalization is also linked to the correct patients preparation with pre-admission pre-operative exams: blood count, electrolytes and coagulation rate, ECG, chest X-ray, anesthetic and nephro-surgical evaluations. This surgical technique can be considered as a alternative future to the established methods of positioning the peritoneal catheter.

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