

EXIT SITE RELOCATION: A NOVEL TECHNIQUE FOR EXIT SITE INFECTIONS

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OBJECTIVES

Exit-site (ESI) infections of the peritoneal dialysis (PD) catheter are a significant cause of catheter loss or even modality switch as well as patient morbidity. Although various approaches, such as unroofing the tunnel tract with shaving of the superficial catheter cuff or partial replantation of a Tenckhoff catheter, have been proposed for its treatment, no golden standard technique has been established as yet.

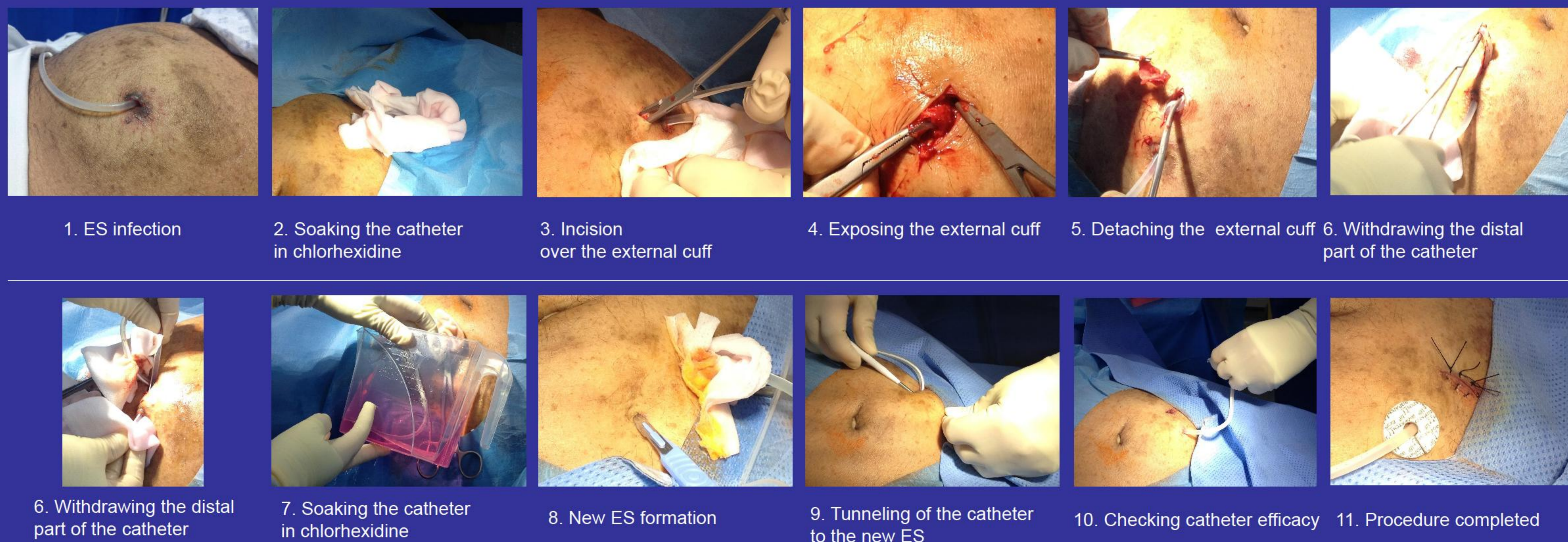
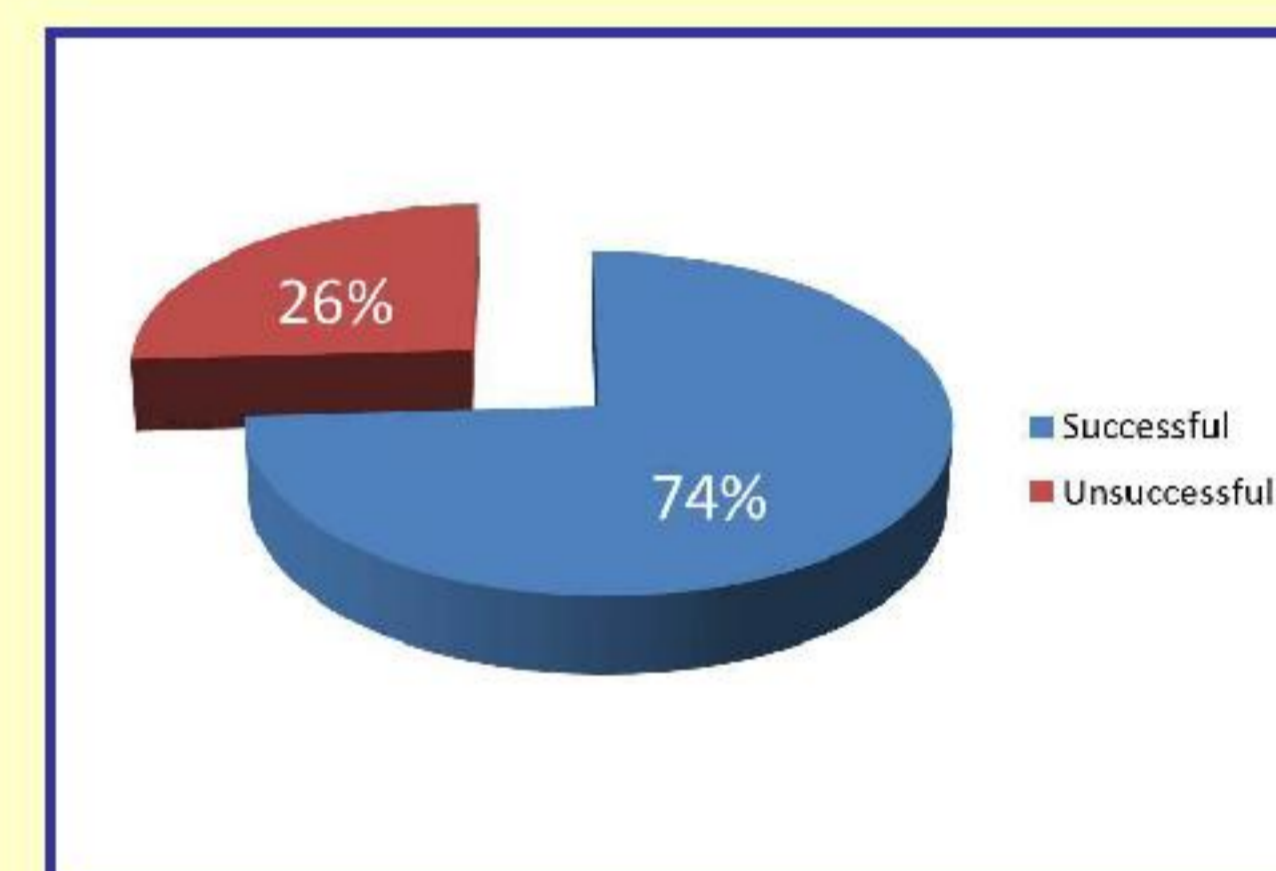
Since 2010, our renal unit has successfully treated chronic exit site infections by removing the external catheter cuff and creating a new exit site as a local anaesthetic (LA) procedure.

METHODS

- PD catheters in our PD centre are coiled, two-cuff Tenckhoff catheters which, in approximately 80% of patients, are inserted as a day-case procedure under LA using the modified Seldinger technique through a short transverse sub-umbilical incision.
- Twenty-seven patients (16 male, mean age 58 years, range 23-81 years) with chronic ESI underwent exit-site relocation under LA.
- Causative microorganisms isolated in exit-site swabs were Gram negative (mainly *Pseudomonas* sp) in 14 patients (52%), Gram positive (mainly *Staph* sp) in 9 patients (33%), whereas no bacteria was grown in 4 patients (15%).
- Pre-operatively all patients were given 1 g Vancomycin and also gentamicin if appropriate.
- **Procedure:** the external cuff is dissected free of the surrounding fibrous tissue through a transverse incision medial to the exit site, the catheter is then withdrawn through the exit site, the cuff is stripped off the catheter (rather than shaved with a scalpel) and then the tunnelling tool is used to create a new exit site which is placed cranial to, and at least 2 cm separate from, the previous exit site. During the procedure, the exposed portion of the catheter is soaked in 2% chlorhexidine for approximately 5 minutes. Once the procedure is completed, the patient is able to continue with their normal PD regime. Oral flucloxacillin is then given for a total of 14 days for Gram positive pathogens or oral Ciprofloxacin for 10 days for Gram negative pathogens.

RESULTS

- Long term resolution of the infection in 20 of the 27 patients (74%).
- PD was not interrupted, preventing patient switch to haemodialysis.
- In 7 patients (26%), subsequent removal of the PD catheter was required to treat recurrence of ESI or subsequent peritonitis or tunnel infection and patients were switched to haemodialysis.
- No other complications were noted.



CONCLUSIONS

- Exit-site relocation under LA with removal of the external cuff is a safe and effective method for the treatment of chronic ESI while the patient remains on PD and avoids switching to haemodialysis.
- The good success rate and high safety profile render this procedure clinically valuable in the treatment of chronic ESI.

REFERENCES:

1. Dombros N, Dratwa M, Feriani M, Gokal R, Heimbürger O, Krediet R, et al. Nephrol Dial Transplant 2005; 20(Suppl 9):ix8-ix12.
2. Crabtree JH, Burchette RJ. Am J Surg. 2005 Jul;190(1):4-8.
3. Wu YM, Tsai MK, Chao SH, Tsai TJ, Chang KJ, Lee PH. Perit Dial Int. 1999 Sep-Oct;19(5):451-4

