

# UNROOFING SURGERY FOR PERITONEAL CATHETER EXIT-SITE INFECTION WITH EXTERNAL CUFF INVOLVEMENT

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**BACKGROUND AND AIM:** Exit-site infection (ESI) of peritoneal dialysis (PD) catheter with external cuff involvement is one of the leading causes of technique failure. According to 2010 ISPD recommendations, the ESI treatment includes prolonged antibiotic therapy, and in a case of a treatment failure, a catheter replacement is recommended. Several pioneer salvage procedures were proposed to resolve the infection and preserve PD. Aim of present study is to present our experience with unroofing surgery, performed in patients with resistant ESI.

**METHOD:** From January to December 2015, 7 patients with ESI and ultrasound signs of infected external cuff, after antibiotic therapy failure, underwent unroofing surgery. Infection was present for from 2.1 to 4.2 weeks before surgery, without concomitant peritonitis. All patients had two-cuffed, swan-neck peritoneal catheter, with external cuff positioned under 3 cm of exit site. The skin above the external cuff was incised in round shape, after which surrounding infected tissue with external cuff was resected “en-bloc” and shaved off from peritoneal catheter. Patients were covered with targeted antibiotic therapy on the day and 72h after the procedure. Average hospital stay was 5 days. Sutured skin was dressed on daily basis with Gentamicin cream due to its sanitizing and lubricating properties, for the next month.

**RESULTS:** ESI was cured in all patients, without any complication, such as catheter damage, dialysate leak or major bleeding. PD was performed continuously. Wound healing was complete in 19 to 47 days. No infection recidives and no catheter loss were recorded during follow up time (3-12 months). One patient died of non-infection cause, and one patient was converted to hemodialysis due to ultrafiltration failure.

Patient	Sex	Age	PD duration	Microorganism	Catheter survival
1	F	68	28 months	Acinetobacter spp	12 m-still on PD
2	M	60	22 m.	MRSA	9 m-still on PD
3	M	81	31 m.	Staph. aureus	6 m-deceased
4	M	65	20 m.	Acinetobacter spp	4m-still on PD
5	F	62	24 m.	Pseud. aeruginosa	4m-still on PD
6	F	63	45 m.	Staph. aureus	3m-transferred to HD
7	F	77	26 m.	Staph. aureus	3m- still on PD

Table 1. Profile of Patients with ESI



Figure 1: “En bloc” resection of infected tissue with external cuff



Figure 2: Exit-site after procedure

**CONCLUSION:** Unroofing surgery proved as effective and economical salvage technique for PD catheter exit-site infection with external cuff involvement, that could reduce hospital stay and spare patients the inconvenience of temporary hemodialysis.

Literature: 1. Crabtree JH, Burchette RJ. Surgical salvage of peritoneal dialysis catheters from chronic exit-site and tunnel infections; *Am Surg* ; 190:4-8. 2. St. Laurent M, Surendranath C, Saad T, et al. A new salvage procedure for peritoneal dialysis catheters with exit site infections. *Am Surg*;12:1215-7.