

A Simple Sustained Traction Method for Continuous Ambulatory Peritoneal Dialysis (CAPD) Catheter Removal

SHANTAJIT NAMEIRAKPAM¹, SHARATKUMAR SINGH NAOREM², SALINITADEVI NAOREM³**Keywords:** Dacron cuff, Recurrent peritonitis, Silicon catheter

Dear Editor,

Continuous peritoneal dialysis catheter removal is mainly done by open surgical technique through the same site of insertion or a site adjacent to the original site of insertion. Patients on Continuous Ambulatory Peritoneal Dialysis (CAPD) may require removal of the catheter due to malfunction and peritonitis [1]. If fungal peritonitis is detected, early catheter removal and anti-fungal cover reduces mortality rate [2]. The open method was traditionally used to remove the catheter. New minimally invasive method with incision at the exit site and sharp dissection has also been tried [3].

We hereby describe a simple sustained traction method of CAPD removal without any incision.

We started practising this method since February 2013. The procedure is performed without any anaesthesia and doesn't involve any open surgery or incision at the exit site. The procedure can be done at the patient's bedside or in the operating room.

In this sustained traction method, injection tramadol 50mg slow intravenous is given 10minutes before the catheter removal. A sustained traction is applied on the catheter till the external cuff comes out or the external cuff yields such that the silicon catheter comes out leaving the Dacron cuff, which had become fibrosed and become part of the tissue. Then the catheter is re-gripped and sustained traction is applied till the inner cuff comes out along with the silicon or the inner dacron cuff yields and the silicon catheter comes out. The exit site was left to heal by secondary intentions.

We retrospectively collected the data from February 2013 to January 2016. A total of 30 catheters had been removed by then [Table/Fig-1]. The indications for removal in 50% of the cases were non-resolving or recurrent peritonitis and other 50% was due to catheter malposition and malfunction for which we had done re insertion through another site [Table/Fig-2]. In four patients who had implantation since 18th month, open method of removal had to be done as the simple method failed [Table/Fig-3]. There were no post-operative complications. The wound was healthy in all the patients.

It can be concluded that, the method of sustained traction for CAPD removal is a totally non-invasive procedure which takes only few minutes to perform with less morbidity to the patient, avoiding any incision and dissection of the exit site and tunnel. This

Year	No of CAPD removal	By open method	By Sustained traction
2013	8	1	7
2014	6	1	5
2015	10	1	9
2016	6	1	5
Total		30	

[Table/Fig-1]: CAPD removal cases in the hospital from 2013 to 2016.

Reasons for removal	No. of cases
Non-resolving peritonitis	15
Catheter migration and malfunction	15

[Table/Fig-2]: Indications of CAPD removal.

Months	No. of cases	Removed by simple traction	Open surgery
0-6 months	16	16	0
6-12 months	4	6	0
12 -18 months	4	4	0
18 -24 th months	2	0	2
>24 th months	2	0	2

[Table/Fig-3]: Time from catheter insertion to removal.

procedure can be done at bedside, reducing the hospital cost and expenditures to the patient. There is lack of peer reviewed article on CAPD catheter removal [3]. Some of the complications which may occur are catheter breakages necessitating open removal and haemorrhage. This method is useful for catheter removal which had an implantation time of 6 months or earlier.

REFERENCES

- [1] Garcia-Martinez MC, Leonos Mirinda A. Factors associated with peritoneal dialysis catheter failure in chronic renal insufficiency. *Rev Invest Clin.* 1997;49(3):189-95.
- [2] Nagappan R, Collins JF, Lee WT. Fungal peritonitis in continuous ambulatory peritoneal dialysis – the Auckland experience. *Am J Kidney Dis.* 1992;20(5):492-96.
- [3] Shroff S, Pandey S, Abraham G, Soundarajan P. A Simple Closed 'Pull and Jerk' Technique for CAPD Catheter Removal. Retrieved February 28, 2016, from <http://www.medindia.net/articles/capd-catheter-removal.asp>

PARTICULARS OF CONTRIBUTORS:

1. Senior Resident, Department of Urology, RIMS, Imphal, Manipur, India.
2. Professor, Department of Nephrology, RIMS, Imphal, Manipur, India.
3. Junior Resident, Department of Microbiology, JNIMS, Imphal, Manipur, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Shantajit Nameirakpam,
Senior Resident, Department of Urology, RIMS, Imphal-795004, Manipur, India.
E-mail: shantajit@gmail.com

FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: **Jun 11, 2016**
Date of Peer Review: **Jul 01, 2016**
Date of Acceptance: **Jul 01, 2016**
Date of Publishing: **Nov 01, 2016**