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THE SELF RETAINING CATHETER FOR LONG TERM GASTROSTOMY AND CYSTOSTOMY

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SUMMARY

Objective: The use of Foley's Catheter as a self –retaining catheter in Gastrostomy and Cystostomy are frequently complicated by dislodgement. A method for use of the catheter is designed.

Design: An extra Foley's Catheter is used to design a cuff to provide secure positioning of the catheter.

Results: Application of the designed Catheter has been used in Gastrostomy and Cystostomy for various indications, with very good effect.

Conclusion: The described method of use of Foley's catheter for Gastrostomy and Cystostomy will be found to be neccessary and very useful, especially for long term indwelling device.

INTRODUCTION

The need to keep a catheter in situ on a long term necessitates the provision of a mechanism for retaining the catheter in position. One of these types of catheters is the Foley's Catheter. Then emphasis has been on the prevention of the catheter from falling out.

We have used the Foley's catheter for various indications, as urethral catheter and also for suprapubic Cystostomy and as Gastrostomy tube. In the latter two indications, one difficulty has been the accidental propulsion of the catheter distally, into the urethra or duodenum, respectively. Also, the free in- out movement of the catheter results in loose fitting of the catheter, widening of the stoma and catheter falling out. Procedure to prevent these includes dressings and Elastoplast application, which get soaked and requires frequent changing. A simple method to keep the catheter stable is described here.

MATERIALS AND METHOD

Preparation of the Catheter

Two Foley's Catheter are needed, one of which is of the appropriate size for the stoma, here referred to as the primary catheter, and a second catheter to be used for preparing the primary catheter. From the second catheter, the part which drainage bag is normally attached is cut out close to its junction with the catheter. It looks like a long funnel. The broad end is split into four or five flanges, along its long axis short of 1.5 to 2 cms from the narrow end, thus leaving a cuff.

A straight artery forceps or appropriate dissecting forceps is passed into the prepared flanged cuff from the flange end then opened out to stretch the cuff. The primary catheter is passed between the tips of the forceps, which is then closed to it and used to pull the catheter through the cuff, being careful not to damage the bulb of the catheter. The cuff fits firmly on the catheter, but will slide on it to adjust it to the position it is required.

Application

The Foley's catheter is inserted into the cavity (Urinary bladder or Stomach), in the usual method, the cuffed flange outside the skin. The balloon of the catheter is inflated as required. The catheter is pulled to a firm grip as the balloon rests on the inner wall of the cavity. The cuff is then slid down along the catheter. The flanges open out over the entrance of the catheter firmly on the skin. A split gauze piece may be placed around the stoma so the flanges rest on it. The catheter remains straight, firm and stable (Figure 1).

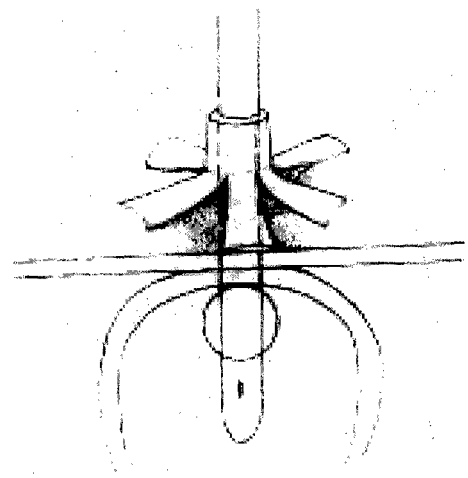

Figure 1: **Diagram of the catheter in position, shows the balloon in the stomach and the flanges outside resting on the skin.**

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Strips of Plaster may be applied over the flanges to the skin for added support, but may not be necessary.

Removal of the catheter will be necessary, for cleaning or for replacement because of defective bulb or after a long time of being in use. The catheter is removed by the usual method of removal of a Foley's catheter. To replace the primary catheter with a new one the flanged cuff is removed from it by sliding it out, cleaned with appropriate antiseptic lotion and reused on the new catheter in the same method described in the application. A new flanged cuff may be constructed only if there is evidence that it is the source of infection in the site from repeated use.

RESULT

The device has been used satisfactorily in suprapubic cystostomy and Gastrostomy as depicted in the Table 1.

Table 1: **Patients for whom the procedure was used**

Gastrostomy	
Neurologically impaired Children needing permanent feeding Gastrostomy	4
Oesophageal Stricture from corrosives, requiring Gastrostomy feeding	2
Oesophageal atresia: Temporary gastrostomy pending definitive corrective operation	2
Cystostomy	
Urethral Stricture from trauma	1
Urinary diversion after urethroplasty	4

Advantages

It is simple to construct and easy to apply. It is easy to clean around the stoma and simple to manage. Because the catheter does not move much in the stoma there is no ulceration and so leakage is very minimal, and most often nil. There is no peristomal skin excoriation. The catheter stays longer.

Disadvantages

The only disadvantage is that initially two catheters are required, which makes it slightly costly.

DISCUSSION

The use of catheter to drain cavities is a frequent surgical procedure. When the catheter needs to be left for a long period the care by the nursing and medical staff and the patient must be adequate. The material of the catheter has been addressed by use of more inert materials like Polythene, rather than rubber, by manufacturers. The design for preventing the spontaneous and accidental falling out of the catheter has led to the variety of catheters. The Foley's catheter has seemed to be the most versatile and most commonly used in clinical practice. For a long term use, it does well by being self-retaining because of the inflatable balloon. Inward movement can cause obstruction distally, and in-out movement causes stomal erosion. The modification described here has been found to prevent these effectively to a large extent. I have used this in Gastrostomy and Suprapubic cystostomy as indicated in the Table.

I have not seen a description of this modification. In the technically developed part of the world modern devices may be available and probably expensive. Bulk purchases of special devices are often unnecessary because of relative infrequent demand. For these cases, a simple effective device is useful. The method of use of the Foley's catheter for Gastrostomy and Cystostomy, especially for long term indwelling as described here will be found to be necessary and very useful.

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