

From the Professional Nurse magazine

Volume 18, Issue 10, 01 June 2003, page 585.

Intermittent self-catheterisation for managing urinary problems

Intermittent self-catheterisation (ISC) is defined by Shah and Leach (1998) as 'passing a catheter into the bladder to remove urine when the patient cannot pass urine normally'. The procedure may be repeated every few hours if necessary and is viewed as an alternative technique to an indwelling catheter as a means of managing urinary problems. **ISC is an established intervention (Addison, 2001) and is recognised as a safe and effective procedure (Moore, 1995).**

Lapides et al (1972, 1976) pioneered the clean technique for ISC, transforming it into a safe and simple technique to learn for the many people suffering from urinary incontinence or voiding difficulties. Haynes (1994) suggests that this allows a patient to gain control of their bladder, rather than their bladder controlling them. The use of ISC in patients with urinary frequency and urgency and those whose bladders do not empty properly has also been advocated (Herr, 1975; Perkash, 1975; Diokno et al, 1983). This is supported by Fowler (1998) who suggests that as there are no medications to improve bladder-emptying ISC would appear to be the best way of managing this problem.

ISC can have many advantages over an indwelling catheter: patients have the opportunity to become self-caring, there is less demand in terms of equipment and the upper urinary tract is protected from reflux (Duffin, 1996; Pelosof et al, 1973; Perkash, 1978). Patients may also be able to return to a normal voiding pattern (Lapides et al, 1976; Skovdal et al, 1988). ISC patients are able to remain sexually active, which promotes well-being and a positive body image (Winder et al, 1997). Patients are also able to take more responsibility for their own care and, in the long term, require less nursing intervention (Doherty, 1999a).

In this trust, from September 2000, ISC was initially offered as an alternative management option to patients in the urology department who failed their trial without catheter (TWOC). Many of these patients appeared to resume normal voiding within a short time span. ISC has since been introduced to patients with chronic urinary retention, detrusor failure, poor bladder emptying and intermittent self-dilatation for recurrent urethral strictures.

Clinical governance demands that we achieve clinical effectiveness. One way of achieving this is by auditing practice and making the necessary changes to ensure its effectiveness. It therefore seemed pertinent to review current practice within the department. This paper discusses a review of the experiences of patients using this method of treatment to manage their voiding difficulties and urinary problems.

The purpose of this review was to establish the most common reasons for ISC, the frequency with which patients were undertaking ISC and their concordance with treatment. The review also looked at the quality of the service provided and attempted to establish whether patients received sufficient support from the nurses. Finally the review was to be used to inform any changes made to the current service.

Methodology

A retrospective audit was undertaken of patients who had been taught ISC between September 2000 and December 2002. Working alphabetically using surnames, alternate patients were randomly selected. Of a total of 126 patients, 63 patients were therefore selected to take part in the review. Medical notes were retrieved to accrue data on the reason for ISC, the date the patients started their treatment and any changes made at their follow-up appointments. A questionnaire was given to patients who attended the urology clinic for review between October 2002 and December 2002 (or sent to them by post if they did not have an appointment during this time) to gauge their opinions and experience of ISC and the service they had received.

Results and discussion

The age range of the 63 patients was 20-98 years (mean 59 years). Of these 81% (51) were male and 19% (12) were female. The main reason for undertaking ISC were identified and categorised into six groups (Box 1). Figure 1 shows the number of patients in each group.

TWOC patients accounted for 40% (25) of all patients taught ISC in this time frame. Failed TWOC in patients who had initially been catheterised because of acute urinary retention was determined by the following:

- Not being able to void after catheter removal
- Voiding less than three times in a row with a voided volume of <150ml and a residual volume of >350ml.

Research has shown that the experiences and outcomes for failed TWOC patients using ISC as an alternative to indwelling catheterisation are very good. Patel et al (2001) carried out a study that assessed the outcome of different forms of urinary drainage following acute urinary retention, with particular reference to patient preference. All patients had an indwelling catheter (50 in total) initially and were then taught to self-catheterise. Of these patients, 34 were able to perform ISC and 16 had an indwelling catheter reinserted.

Questionnaires asked the patients their preference on the method of urinary drainage and 29 out of the 34 performing ISC preferred this to having an indwelling catheter. Another significant factor in this study refers to spontaneous voiding. Nineteen patients resumed normal voiding sufficiently to stop using ISC. This supports the findings of another small study carried out by Skovdal et al (1988) who investigated the possibility of intermittent catheterisation in postoperative urinary retention. They reported that eight patients required one single catheterisation to resume normal voiding function, while three required two catheterisations and four needed four such procedures, with the average number of catheterisations at 2.6 per patient.

While these are both relatively small studies, there is some evidence to support the continued use of ISC for patients who may resume spontaneous voiding within a relatively short period of time. In our review 15 of the 25 TWOC patients taking part resumed spontaneous voiding without the need for surgical intervention.

Frequency of ISC

Knowing the frequency of ISC is important to ensure that patients are catheterising as often as necessary, but not too often, in order to maintain a healthy bladder. There are a number of different formulas found in the literature to determine what the frequency of ISC should be. For example Hunt et al (1996) suggest that volume on catheterisation should not exceed 300-400ml and that it is also important to consider the underlying aetiology, but in general catheterisation should be done frequently enough to avoid the bladder becoming over-distended and to prevent incontinence. We use a simple formula, which is a rough guide for patients to use until they are familiar with ISC. This is shown in Table 1.

The results of our review showed that patients self-catheterising once a day accounted for the largest group, with 10 of the TWOC patients falling into this group and resuming spontaneous voiding. There were three patients with a residual volume of up to 300ml doing ISC daily and three performing intermittent self-dilatation (ISD). One patient with chronic retention performs ISC daily, although his residual volumes are 600ml; he drinks over three litres of fluid a day and is a long-standing user who will not catheterise more frequently. The 15 other TWOC patients did ISC more frequently (five twice a day, six three times a day, and four four times a day) depending on their residual volumes. The patients who perform ISC four times a day are those with detrusor failure (five), chronic retention (two), post-TWOC (four) and one other (a woman who was catheterised while she had a urinary tract infection and had not been able to void afterwards).

It might be useful to address the issue of the long-term patients whose residual volumes are over the recommended amounts at each catheterisation, but who refuse to catheterise more

frequently, and other long-term users of ISC. Their reasons for continuing this practice showed that they feel that it gives them the freedom to perform ISC when it suits them, without compromising their upper tract function, which in these long-term users is checked every six months. Other reasons for long-term use include those patients who use ISC for self-dilatation and have had more than one (most of them two) urethrotomy procedures and are not keen to have any further surgery. These patients account for 25% of the total number of patients in the review.

Sixty-five per cent of patients stated that they were not tempted to give up ISC, suggesting that they believe ISC is an acceptable form of urinary management for those with long-term problems. It also suggests that concordance is high, with at least one-third of these patients facing the possibility of performing ISC for the rest of their lives.

The aim of using ISC in TWOC patients is that they should eventually return to a normal voiding pattern. Of the TWOC patients in the review group the shortest period during which ISC was carried out was one week (after a urinary tract infection cleared) and the longest 13 months (after spinal surgery). The other eight patients resumed normal voiding between three weeks and three months, with only one going on to have transurethral resection of prostate (TURP).

Reasons for stopping ISC in the group were quite acceptable; it is not clinically effective for patients to continue doing ISC beyond clinical need. For example patients who are voiding and have three consecutive catheterisations of 150ml stopped performing ISC (25%), as this level means that normal bladder function had returned. One patient doing ISC for stricture therapy had recurrent urinary tract infections and stopped for this reason.

Nursing support The patients were asked if they felt they had received enough support from the nurse. A positive response was recorded by 92% of patients, 2% said no and 6% made no reply. One patient did not feel that there was enough support, as she thought the doctor should be seeing her and not the nurse. No comments were made on how the nurse could be more supportive.

The final question asked patients to comment on what changes were needed to the service currently provided to best meet their needs. Sixty-one per cent of the patients stated that the service currently offered met their needs, with many positive supporting comments about the service. Suggestions made by others included telephone follow up and a newsletter.

The comments about the support offered by the nurse were very encouraging. Comments included: 'very helpful', 'supportive', 'always phones back' and 'always seems to know the answers'.

Conclusion

Intermittent self-catheterisation (ISC) has gained in popularity since the 1970s and with its advantages for self-care should be offered to all patients as an alternative to managing their bladder-emptying problems. Offering ISC to patients with voiding dysfunction or bladder-emptying problems can enhance the quality of their life and give them the opportunity to resume normal voiding without the hindrance of an indwelling urinary catheter. The above results show that patients who chose ISC were happy to use this method of management for their urinary problems. The results of spontaneous voiding after failed TWOC is also supported by this review, with patients continuing to void spontaneously without the need for surgical intervention. (Patients are followed up for six months before being discharged and have not been re-referred by their GP.)

From this review we can determine that ISC appears to be an effective, popular method of managing urinary problems, with a high percentage (68%) of patients who need to continue with this method of managing their voiding difficulties. Doherty (1999b) suggests that such use of intermittent catheterisation rather than indwelling catheterisation will become the norm. As far as our practice is concerned, changes will include setting up a telephone follow-up service as an option for some patients.

Acknowledgement

The author would like to thank Mandy Bell, former Urology Sister, for her help with this initiative.

Wendy Naish, BSc (Hons), MA, RN, Clinical Nurse Specialist - Urology, Epsom and St Helier NHS Trust, Epsom

Addison, R. (2001) *Intermittent self-catheterisation. Nursing Times Plus* 97: 20, 67-69.

Diokno, A.C., Sondo, L.P., Hollander, J.B., Lapidés, J. (1983) *Fate of patients started on clean intermittent self-catheterisation therapy ten years ago. Journal of Urology* 129: 1120-1122.

Doherty, W. (1999a) *Indications for and principles of intermittent self-catheterisation. British Journal of Nursing* 8: 2, 73-84.

Doherty, W. (1999b) *EasiCath: an advanced alternative to indwelling urethral catheters. British Journal of Nursing* 8: 12, 815-820.

Duffin, H. (1996) *Clean intermittent self-catheterisation. Journal of Community Nursing* 10: 12, 18-20.

Fowler, C.J. (1998) *Bladder problems. In: MS Research Trust. Multiple Sclerosis Information for Health and Social Care Professionals. Letchworth: MS Research Trust.*

Haynes, S. (1994) *Intermittent self-catheterisation: the key facts. Professional Nurse* 10: 2, 100-104.

Herr, W.H. (1975) *Intermittent catheterisation in neurogenic bladder dysfunction. Journal of Urology* 113: 477-479.

Hunt, G.M., Oakeshott, P. Whitaker, R. (1996) *Intermittent catheterisation: simple, safe and effective, but underused. British Medical Journal* 312: 103-107.

Lapidés, J., Diokno, A.C., Sibling, S.J., Lowe, B.S. (1972) *Clean intermittent self-catheterisation in the treatment of urinary tract disease. Journal of Urology* 107: 458-461.

Lapidés, J., Diokno, A.C., Gould, F.R., Lowe, B.S. (1976) *Further observations on self-catheterisation. Journal of Urology* 116: 169-171.

Moore, K.N. (1995) *Intermittent self-catheterisation: research-based practice. British Journal of Nursing* 4: 18, 1057-1063.

Patel, M.I., Watts, W., Grant, A. (2001) *The optimal form of urinary drainage after acute retention of urine. British Journal of Urology International* 88: 26-29.

Pelosof, H.V., David, F.R. Carter, R.E. (1973) *Hydronephrosis: silent hazard of intermittent catheterisation. Journal of Urology* 110: 375.

Perkash, I. (1975) *Intermittent catheterisation and bladder rehabilitation in the spinal cord injury patient. Journal of Urology* 114: 230-233.

Perkash, I. (1978) *Detrusor-sphincter dyssynergia and detrusor hyperreflexia leading to hydronephrosis during intermittent catheterisation. Journal of Urology* 120: 620.

Shah, J., Leach, G. (1998) *Fast Facts: Urinary continence. Oxford: Health Press.*

Skovdal, J., Hoffmann, E., Jensen, P., Petersen, J.K. (1988) *Postoperative retention of urine. Ugeskr Laeger* 150: 48, 2976-2978.

Winder, A., Doherty, W. Bennett, P., Buckley, R. (1997) *Teaching to Teach Intermittent Self-Catheterisation. Peterborough: Coloplast.*

Copyright © 2004 Emap Communications. All Rights Reserved. Your use of this material is governed by copyright laws, and the terms and conditions of this website: www.professionalsnurse.net