



LETTER TO THE EDITOR

50 Years with clean intermittent self-catheterization – a Scandinavian perspective

Dear Editor,

We read with great interest the paper by Banerjee on 50 years' experience of clean intermittent self-catheterization (CISC) [1]. In Scandinavia, CISC was first introduced during the 1980s among children with neurogenic lower urinary tract dysfunction (NLUTD), congenital anomalies and functional voiding disorders. Early scientific reports also included women with residual urine and recurring urinary tract infections due to various disorders [2]. During the early 1990 the method came into broader use among adult patients. CISC was a prerequisite for the development and wide-spread use of continent urinary reservoirs such as the adaptation of the Kock reservoir, originally constructed for inflammatory bowel diseases, into a useful and practical urinary diversion [3,4]. Other continent diversions have followed, for instance the catheterizable vesicostomy with or without bladder augmentation [5] and by the mid-1990s CISC was considered gold standard in the care of adults with newly acquired spinal cord injury.

Scandinavian medical technology companies became world leaders in the development of catheters as hydrophilic coating was introduced [6]. Ease of use and comfort for patients were greatly increased. Further technical development has later provided female catheters, foldable catheters, and ready-to-use catheters for travelling purposes [7] as well as PVC-free catheters developed to reduce environmental impact [8]. Indeed, the use of CISC has become daily practice for many patient groups in urology. Various bladder outlet disorders, underactive detrusor, neurogenic and non-neurogenic incontinence as well as voiding complications after bowel surgery or gynaecological procedures are often managed by CISC for longer or shorter periods of time. In recent decades there has been an advancement in the treatment of urgency incontinence by combinations of bladder relaxant medications, including botulinum toxin, as well as augmentation enterocystoplasty. No doubt, these supplements to our treatment armamentarium have been very rewarding to many of our patients. However, at the end of the day such procedures might, due to compromised bladder emptying, necessitate the use of CISC.

Many scientific articles have been published in this journal regarding the efficacy, safety, and impact of CISC. During the 1990s August Bakke and co-workers in Bergen studied extensively the physical and psychosocial impact of CISC. Some of their landmark results had practical consequences for everybody involved in the teaching and follow-up of CISC. Among other results, they demonstrated that bacteriuria is normally present in 50% of monthly urine culture samples during one

year of CISC, and that a self-catheterization frequency of four times a day incurred significantly fewer symptomatic UTIs than twice a day [9]. Paediatric urologist Kelm Hjälmås and co-workers in Gothenburg reported on the efficacy and safety of CISC among children, teenagers, and young adults as part of the establishment of an advanced follow-up service for children with NLUTD [10].

The practice of CISC also paved the way for clean intermittent dilatation as prevention of the recurrence of urethral strictures and for self-administered instillations in the treatment of chronic bladder inflammation and radiation cystitis.

CISC has truly revolutionized many treatments for both young and old, neurogenic, and non-neurogenic disorders. However, with such a practical technique at hand, a word of caution may also be in order. The current reality of scarce resources for functional urology means that a substantial number of men with prostate enlargement and other bladder outlet disorders are managed by CISC over long periods of time rather than being offered a curative treatment of their voiding disorder, such as transurethral resection of the prostate or open urethroplasty. Though being an excellent *modus operandi* for the treatment of insufficient bladder emptying, the use of CISC brings about risks of recurrent UTIs and even septicaemia. Episodes of blood on the tip of the catheter or mild haematuria are not uncommon and may claim health resources to rule out bladder cancer. Hence, the brilliant solution of CISC must not be used as an excuse to refrain from offering, or an obstacle to carry out, efficient urological surgical treatment, but rather as a possibility for improved quality of life in our patient groups, this in the true spirit of Professor Jack Lapides who, precisely fifty years from now, published his pivotal paper on CISC [11].

Disclosure statement

No potential conflict of interest was reported by the author(s).

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