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# The use of intermittent self-catheterisation for voiding dysfunction.

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In 1972, Dr Jack Lapides pioneered the use of clean intermittent catheterisation (CIC). The theoretical concept for CIC was to manage urinary retention symptoms in patients who had a neurogenic bladder, bladder abnormalities and to reduce the risk of these patients developing a urinary tract infection (UTI) (Lapides et al. 1972). Over four decades later, it is regarded as the gold standard for managing chronic urinary retention (Averbeck et al. 2018), it remains a clinical technique frequently performed by nurses to alleviate the symptoms of retention in acute and rehabilitation settings (Newman et al. 2003), and novel methods of CIC are being practised within the community setting (Rognoni et al. 2017).

Through the years, there have been variations of the name used for CIC such as clean intermittent self-catheterisation (CISC) (Weynants et al. 2017), intermittent self-catheterisation (ISC) (Birmingham et al. 2013) and intermittent urinary catheterisation (IUC) (Fumincelli et al. 2017). Despite the differing titles, the method remains the same, which is a periodic voiding method that assists the flow of urine (Fumincelli et al. 2017). It is performed by inserting the catheter which is a thin hollow tube with small eyelets at the peak, into the urethral orifice, along the urethra and into the bladder for urine drainage (Iggulden et al. 2009).

## Indications for using ISC

There are several reasons why ISC may be initiated. According to the European Association of Urology Nurses (Vahr et al, 2013), ISC should be performed when there is a residual urine in the bladder and accompanied with voiding symptoms or complications such as UTI, patient discomfort, voiding symptoms and incontinence. It should not be performed based upon a residual urine alone.

Various bladder treatments that reduce detrusor overactivity, can cause incomplete bladder emptying (Lieberman et al. 2017), and ISC is often prescribed for this cause. ISC should be recommended for patients that have problematic voiding symptoms along with an elevated residual urine (Collins et al. 2017).

## Patient assessment

A clinical assessment is an important initial step to determine whether a patient should commence on ISC. Performing a 3D portable ultrasound scan of the bladder, using a portable scanner, is a rapid and non-invasive method to determine a residual volume (Thanagumtorn 2016). Symptom assessment is also fundamental, the sensation of incomplete emptying, voiding small amounts and straining to void are all indications of voiding dysfunction (Kobayashi et al. 2018), and accompanied with a raised residual urine may indicate the need for ISC.

## ISC insertion techniques

There are two main insertion techniques. According to Seth et al. (2014) the clean technique involves the use of reusable or single use catheters, following ordinary hand washing procedures, whereas the aseptic technique requires a sterile approach. Patients requiring ISC are often taught by nurses on how to insert the catheter and patients retain this skill for as long as it is required (Bickhaus et al. 2015).

Patients who undergo correctional surgery for urinary incontinence are often plagued with voiding failure anxieties however, use of an instructional video on how to self-catheterise has been reported to reduce the apprehensions towards performing the task (Oliphant et al. 2013). Optimally, good motor and sensory functions are the key skills required for patients to effectively perform ISC (Weynants et al. 2017).

## Conclusion

The purpose of ISC is to alleviate bothersome voiding symptoms. It remains a common clinical procedure which can be performed in a clinical or community setting. Adequate clinical assessment is fundamental and the indications for ISC should be determined prior to insertion. Nurses are key instructors when teaching patients to self-catheterise and have a significant role when assessing patient proficiencies in the case of urinary voiding dysfunction.

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