(Not very) clean intermittent self catheterisation

BY JONATHAN CHARLES GODDARD

In a small room near the operating theatre of the London Hospital sometime in the 1880's, a surgeon slips off his outdoor frock coat. From his pocket he pulls a silver curved catheter, spits on it and nonchalantly passes it into his own bladder draining the urine into the waiting porcelain bowl. He replaces the catheter into his pocket and walks into the adjacent operating theatre, the waiting House staff and students fall silent; "Shall we begin gentlemen?"

Figure 1: Silver catheter, with retaining hoops, 1882.

Figure 2: Silver extending female catheter, 1867.

This story was related by Edwin Hurry Fenwick (1856–1944), himself a surgeon at the London, and tells of his former teacher, a skilled operator whose name he does not reveal. He writes with a note of both disappointment at his poor catheter care and surprise at the lack of 'catheter fever' and sepsis in his old boss. What I take from this story, apart from the wonderful anecdote, is the appreciation that intermittent self catheterisation is not new.

In this series of articles I am going to show you some of the exhibits contained in the Museum of Urology, hosted on the BAUS website (www.baus.org.uk). Firstly, I would like to declare a potential conflict of interest as I am part of an advisory board for Coloplast and was made, at their request, into a rather disturbing floating hologram to give a talk on the history of catheters at a recent product launch, the research for which inspired me to write this article. I'm also going to include an image of one of their catheters. Having declared that – I will get on with the story.

> "Gentlemen could have a walking cane with a compartment to discreetly store their catheter"

We tend to think of catheters as plastic tubes with a balloon on the end to hold them in, but historically, catheters were rarely left in situ after the bladder was drained. Often rigid and made of chrome or silver they were passed to relieve acute retention, by a doctor or surgeon, or to negotiate a urethral stricture and then removed. Occasionally they were left in for a few hours and rarely a few days. Some had rings or loops near the end (Figure 1) to thread a tape or ribbon through to secure them to clothing, a belt or strap or even pubic hair. During the nineteenth century, some were developed with flanges or inflatable leather or rubber balloons to hold them in, but this was rare. The passage of a catheter could lead to 'catheter fever', i.e., infection. The longer it was left in, the higher the risk.

In chronic bladder outflow problems, catheters were required to be passed on multiple repeated occasions, this was called the 'catheter life' and was the main management for bladder outflow obstruction due to the prostate or a stricture, or for bladder atony. Intermittent catheterisation was needed and was often lifelong, clearly as the doctor was not available constantly, the patients had to be taught to pass the catheters themselves; thus, intermittent self catheterisation, as practised by Hurry Fenwick's boss. The mortality of the 'catheter life' was 8% in the first month – from sepsis.

Patients carried their catheters around with them (as they do today). Figure 2 shows a female catheter which collapses and extends, easily carried in a purse or handbag. Gentlemen could have a walking cane with a compartment to discreetly store their catheter, or it was slipped into their tall top hats, or the capacious pocket of a frock coat.

The next part of the story was born of war. The trench fighting of the Great War (1914–1918) with its high velocity bullets, explosive shells and the sheer volume of combatants, led to a large number of spinal injury patients. Many died, even those who were rescued from the mud of the trenches and made it to a base hospital, often succumbed to urinary sepsis. Eventually, men like urologist Sir John Thompson Walker (1871–1937) realised that drainage of the bladder was vital in these men. He urged frontline medical officers to create urgent suprapubic cystostomies at the casualty clearing stations. During the Second World War (1939–1945), many of the English spinal injury casualties were managed at Stoke Mandeville Hospital by Ludwig Guttmann (1899–1980), later Sir Ludwig). Again, he stressed the importance of good bladder management. However, he pushed the concept of intermittent catheterisation rather than tidal drainage with an in-dwelling catheter. This, he

insisted, should only be carried out by a medical officer and in the most sterile way possible. Nurses or orderlies were not allowed to do it, and certainly not the patients. His results however were impressive; 80% were discharged with sterile urine. It was a world away from Fenwick's old boss and the catheter life.

Another world away was America of the 1970s. Dr Jack Lapides (1914–1995), a reconstructive urologist from Ann Arbor in Michigan, was faced with a 30-year-old lady with multiple sclerosis, urge incontinence and incomplete bladder emptying. After several failed continence procedures he suggested a urinary diversion, she refused. After some thought, Lapides asked urology nurse Bette Lowe (c.1916–2007) to teach the lady how to catheterise herself, at first with a mirror, then just by feel. She learned it in less than a day. She was sent home with a few 14Ch Robinson catheters, a tube of lubricant and a bottle of Detergicide sterilising fluid.

After six months, she remained well, dry, had been able to resume a social and a sexual life and was infection free, despite admitting to Dr Lapides she was just using soap and water to wash her catheters and dropped one a few times and had just given it a "quick swill". It appeared that Prof Guttemann's "super sterile doctor only" technique was not required. Lapides and Nurse Lowe began teaching more patients and clean (as opposed to sterile) intermittent self catheterisation (CISC) was born.

Figure 3: Coloplast Luja CISC catheter, 2023.

Since then, catheters specifically designed for CSIC have been developed by medical companies and patients have reverted to the Victorian practice of self-catheterisation, free of indwelling catheters; at least that's what we aspire to with all the patients who can manage it.

Finally, and interestingly, Figure 3 shows one of the latest designs of CISC catheters with multiple small holes to improve bladder drainage. Now look again at Figure 2 – clever people, the Victorians.

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