Non-Catheter simple, non-invasive, bladder draining method with no running costs

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Abstract

This paper introduces a method of completely avoiding antibiotics for post-operative prostate patients having a much-reduced ability to pass urine. Antibiotics are otherwise continually needed to treat recurring infections caused by catheters used for bladder draining. Frequently after a prostate removal operation, the bladder cannot be emptied because the detrusor (bladder-squeezing muscle) had been permanently over-stretched due to chronic bladder outflow blockage caused by a chronically enlarged prostate. Using a catheter twice daily is uncomfortable and can introduce repeated infections into the bladder, requiring continual antibiotics to control. A method of avoiding antibiotics is of great importance because their recurring use can cause resistance and can lead to premature death from the recurring bladder infections. The events leading up to the problem for the patient’s case that is described below are presented in detail, hoping this may help others to recognise and address this fairly common condition sooner.

Key Words: urinary retention, bladder infection, non-invasive, bladder draining

Case report

The patient, 'Tom' (assumed name), experienced gradual, chronic blocking of the urethral outflow over many months, due to a slowly enlarging prostate. For several months Tom had noticed a slowly increasing girth, but incorrectly assumed he was just putting on weight. Over many weeks, the amount of urine expelled gradually lessened. When these two factors became serious enough for a doctor’s visit, especially since the volume expelled in a typical urination had dwindled to about 20 ml (the normal being 500 ml, for a full bladder), the doctor (standing in for the patient’s family doctor, who was on holiday) prescribed an antibiotic for urinary tract infections and told Tom to drink plenty of water. This was the exact opposite of what should have been advised, since the correct diagnosis was that Tom had an enlarged prostate causing a bladder outflow obstruction.
Tom stopped the drinking of plenty of water when he realised his volume of expelled urine was not improving. His girth then had become much greater and he could not lie down to sleep and felt unwell. Two days after seeing the doctor, he felt so unwell that he had to stand upright all night and the urine expelled was only about 10 ml per attempt. He then saw another doctor who deduced that his bladder was over-full. Instead of advising him to go immediately for an emergency catheterization, the doctor said he should go the next day to see a urology consultant.

Outflow had ceased completely and resulted in ballooning out of a diverticulum (a pouch) from the wall of the over-distended bladder. The bladder had caused observable distension of the lower abdomen but the patient did not recognize it as a serious situation until urine outflow completely ceased. Tom’s over-full bladder prevented his kidneys from discharging any urine into the bladder, a serious condition that could lead to irreversible kidney damage. A normal full bladder holds about 500 ml but on visiting the urologist the next morning, a catheterization drained out 2500 ml of urine! A blood test after catheterization showed that the kidneys were ‘deranged’ (the term used by the doctor), but fortunately all subsequent blood tests showed that normal kidney function had returned.

**The draining method**

The method in its simplest form requires two kitchen stools (square, soft flat topped, about 19 inches high), a six-inch high wood box with a folded towel atop it, and a 1-liter plastic beaker. These are placed closely in a row, and the subject kneels on the wooden box and leans forward onto the kitchen stools, which support his weight. The beaker is held in a suitable holder so that its rim just touches the nearest kitchen stool.

*Figure 1. The draining setup*
The subject must relax and slowly sink onto the two kitchen stools to support him, subject to some important essential safety cautions given in the two downloads linked to this article. It takes a few days to get used to allowing urine to flow out while in this position, because everyone is trained from an early age not to allow outflow when one is in a horizontal position.

After some outflow has occurred and flow has ceased, the subject can get up and place a rubber semicircle on the first kitchen stool to mimic the pressure of the bladder emptying muscle when the subject resumes his position as above. A tightly-rolled towel could be used instead, if its diameter is 3 inches and length 18 inches, and it must be bound every two inches with string loops. It is placed like a crescent but it (or the rubber semicircle) must be below the umbilicus. The towel or a rubber semicircle applies pressure around the bladder, thus mimicking the action of the detrusor muscle.

Figure 2. The rubber pressure semicircle

This simple but effective method is based on passive-weight-assisted postural drainage for a person of normal Body/Mass Index (BMI). An overweight person must avoid placing his whole weight onto the nearest kitchen stool. Detailed instructions and cautions can be found in the downloads.

This patient never had any further urinary tract infections during the seven years of using the method described here. Prior to using the method there had been several urinary tract infection episodes caused by use of conventional catheters, which required antibiotics to cure. Information from several General Medical Practitioners is that recurring infections from catheter use are a root cause of the eventual premature demise of some patients, so a method that avoids infections and catheters could be a great help.

A Short Communication was published previously in the Indian Journal of Urology (Hocking, 2010) but this was allocated a 3-page length limit, and the longer essential details of the technique are given in the present paper, with a fuller description in the .pdf download available on the IJHC website.

Reference

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The Indian Journal of Urology has kindly agreed to permit reproduction of the downloadable version of the original paper per the above reference.

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