Urinary catheters

Keywords
continence  •  CATHETER VALVES  •  CATHETER CARE

Author
Ann Yates, BN, DipN, FETC, RGN, is director of continence services, Cardiff and Vale NHS Trust.

Urinary catheters have been available for many years and are a popular alternative to the more customary urine drainage bag. However, many healthcare professionals are unaware of the range of valves available and prescribe only one or two types that they always use.

The traditional method of allowing urine to drain freely into a bag can cause problems for patients (van den Eijkel and Griffiths, 2006). As the bag fills it becomes heavy and uncomfortable, which can restrict the patient socially and cause anxiety and embarrassment. This method can also be detrimental to the bladder and lead to loss of normal bladder function.

Catheter valves are a discreet and more comfortable alternative to urine bags. Another advantage is that they offer the potential for maintenance of bladder function, capacity and tone by allowing the filling and emptying of the bladder, mimicking normal bladder function.

Valves reduce trauma to the bladder by allowing the bladder wall to be lifted away from the catheter. In addition, removing the leg bag reduces traction of the catheter on the bladder neck. Furthermore, research shows that using a catheter valve with a four-hourly release is associated with reduced catheter blockage (Sabbuba et al, 2005).

Cross infection is a problem with drainage bags, especially in acute or institutional settings but is less likely to occur with catheter valves as they are generally operated by the individual rather than carers.

Factors to consider
Full patient assessment is required because valves are unsuitable for some patients. These include people with severe cognitive impairment; uncontrolled detrusor overactivity (which might cause urine to bypass); ureteric reflux or renal impairment (Fig 1); or small bladder capacity. In the last case, the valve may have to be opened inconveniently often.

Dexterity has also been suggested as a problem that may prohibit a patient from using a catheter valve. It could be argued that there is little difference between opening a valve and opening a drainage bag tap. On the other hand a patient may be able to obtain help to open a tap twice a day but not to open a valve every few hours.

Six types of catheter valves are available on prescription in England and Wales (Drug Tariff, 2006). They are single-use-only devices and should be replaced every 5–7 days. They average about 8–10cm in length and weigh about 10g. They are made from a range of materials, including polypropylene.

**Professional responsibilities**
This procedure should be undertaken only after approved training, supervised practice and competency assessment, and carried out in accordance with local policies and protocols.
PVC and rubber but all are latex-free. All have a CE mark and are sterile packed. They fasten to catheters via either a smooth (Fig 2) or ridged (Fig 3) connector.

Measurement of free drainage rates is similar for all valves (290–325ml/min). Most have a soft connector to allow a drainage bag to be attached. They have different designs, particularly in the tap. There are three main types – twist, lever and bayonet (Fig 4).

**DEVICE CHARACTERISTICS**

A good match between the patient and the device will optimise patient care. The valve should fit securely without excessive effort and should not become loose. Some are easier to open than others, which may be important if the patient has poor dexterity but the valve should resist accidental opening (Fig 5).

It is important that those who use a connected drainage bag are able to fit the bag to the valve securely and with ease. The catheter valves themselves should be leak-free and discreet.

**CARE OF A CATHETER VALVE**

**Procedure**

- The selected valve should be connected to the catheter using the same aseptic technique as when connecting the initial drainage bag. As with drainage bags, it should be changed every 5–7 days.
- If changed by the patient it should be a clean technique. The patient should wash their hands prior to removing the old valve and then attach the new sterile valve without touching the end connecting to the catheter. They should dispose of used valves in general waste rubbish and wash their hands again.
- If changed by a carer, the carer should wash their hands, put on non-sterile gloves, remove the old catheter valve and replace it with the new sterile valve from the packet, without touching the end attaching to the catheter. They should dispose of the old valve and gloves in general waste rubbish and wash their hands again.
- Document in the patient’s notes the type of valve used, the date it is changed and the next due date for changing.
- If a drainage bag is required for some part of the day or night it can be attached to the end of the catheter valve by pushing the bag’s connector into the outlet of the valve. Then open the valve to allow urine to drain into the bag. The bag should be either secured onto the leg if it is a day bag or put on to a catheter stand if a night bag, to allow adequate drainage. Follow the manufacturer’s instructions (Fig 6).
- It is vital that professionals and patients understand the device that is being used and how to obtain adequate supplies. Patients need a contact number for the appropriate health professional.

**REFERENCES**


---

**NEXT WEEK**

Systems of Life
The ageing endocrine system