

REFERENCES

Bierman S, Carignan, M. (2003) *The prevention of adverse events associated with urinary tract catheterization.* tinyurl.com/catheter-adverse-events

Billington, A. et al (2008) Minimizing the complications associated with migrating catheters. *British Journal of Community Nursing*; 13: 11, 502–506.

Centers for Disease Control and Prevention (2002) *Guidelines for the Prevention of Intravascular Catheter-Related Infections.* tinyurl.com/catheter-guidelines

Darouiche, R. et al (2006) The impact of StatLock securing device on the rate of catheter-related urinary tract infection: a prospective, randomized multicenter clinical trial. *American Journal of Infection Control*; 34: 9, 555–560.

National Audit Office (2004) *Improving Patient Care by Reducing the Risk of Hospital Acquired Infections: a Progress Report.* NAO. tinyurl.com/nao-improving-care

NHS Quality Improvement Scotland (2004) *Urinary Catheterisation and Catheter Care. Best Practice Statement.* NHS Quality Improvement Scotland. tinyurl.com/quality-improvement-catheters

Why more attention must be given to catheter fixation

An unsecured urinary catheter can lead to infection and complications

AUTHOR Carolyn Freeman, BSc, is lead nurse, continence care, Greenwich Teaching PCT, London.

ABSTRACT Freeman, C. (2009) Why more attention must be given to catheter fixation. *Nursing Times*; 105: 29, 35–36.

Failing to secure urinary catheters can result in complications, including infection and discomfort for patients. This article explores why catheter fixation is important and some of the devices that can be used to achieve it.

The RCN highlight that continence is one of the fundamentals of basic nursing care and that good continence care can significantly increase patient dignity and quality of life (RCN, 2008). Despite advances in the treatment of incontinence, bladder control is not an attainable goal for everyone (RCN, 2008).

Although catheters should be used with caution, they do have a place in managing continence problems. The RCN points out that urinary catheters provide an effective way of draining the bladder (RCN, 2008), and National Occupational Standards are available to guide nursing practice in catheter care (Skills for Health, 2008). The RCN has endorsed these and is encouraging their use across all healthcare sectors.

However, catheter-associated urinary tract infection (CAUTI) is a well-recognised source of increased morbidity and an economic burden in acute care services. Fixation of the catheter following insertion is one area that has not been adequately addressed.

In its recent guidance for nurses on catheter care, the RCN said that when a decision to catheterise has been made, it is imperative nurses work within a multidisciplinary framework (RCN, 2008) (Box 1).

The guidance recommends that:

- Nurses must assess the clinical need for catheter use as part of their professional role, even if medical directives state ‘to catheterise’;

- When a catheter is inserted, the nurse should consider early removal to reduce risk of infection;
- All healthcare professionals must familiarise themselves with the equipment available and ensure patients receive information about the choice of products. Nurses need to understand the benefits and disadvantages of this equipment.

IS FIXATION IMPORTANT?

Secure catheter fixation is an important part of catheter management but is often neglected or equipment is used that is not designed for this purpose: for example, sticking plaster. If a catheter becomes dislodged, there can be severe trauma to the patient’s urethra, causing pain and with the potential risk of infection.

Bypassing of urine can be another problem, particularly in older patients where the presence of a catheter can result in overactivity of the detrusor muscle. If the catheter bag becomes too heavy with urine, and it is not supported properly, the bag can pull on the catheter. This, along with catheter movement at the site of insertion, can cause discomfort and irritation to the patient.

A best-practice statement published by NHS Quality Improvement Scotland (2004) advises that catheters and attached drainage systems are properly secured in a comfortable position for the individual after insertion. This prevents

movement of the catheter and urethral traction and leads to improved comfort and good bladder drainage.

It is suggested that 80% of all urinary tract infections (UTIs) are related to the insertion of indwelling urethral catheters (Plowman et al, 2001), and this is acknowledged in national evidence-based guidelines designed to reduce the risk of such infections (Pratt et al, 2007).

Although the evidence for minimising CAUTIs through

BOX 1. CLINICAL INDICATIONS FOR URINARY CATHETERISATION IN ACUTE CARE

- During and post-surgery
- Acute/chronic urinary retention
- Monitoring renal function hourly during critical illness
- To irrigate the bladder when haematuria is of concern
- To instil medication into the bladder
- Investigative purposes

catheter fixation is limited, anecdotal evidence from the US has shown a reduction in monthly CAUTI rates from 3.46% to 0% following use of a catheter stabilisation device for six weeks (Patronik, 2002).

A National Audit Office (2004) report indicated that revised urinary catheter management policies could

lead to a decrease in complications arising from inappropriate catheter use. Catheter stabilisation devices should, perhaps, be recognised nationally as an essential component of catheter care.

The importance of catheter fixation is highlighted in a number of local policies and protocols, such as that of the Greenwich Teaching PCT, the Queen Elizabeth Hospital NHS Trust and the Bournemouth and Poole Teaching PCT, as well as in international guidelines, such as those of the Centers for Disease Control and Prevention (2002) in America.

SECURING A CATHETER

Specifically designed Velcro straps are often used to position a catheter but these can act as a tourniquet. Additional problems include:

- Restriction of venous and lymphatic flow, increasing the risk of deep vein thrombosis and pulmonary embolism in patients with impaired circulation (Bierman and Carignan, 2003);
- Maintaining adequate hygiene (catheter straps must be washed regularly);
- Lack of guidance on the tension needed to secure them (the more worn they get, the more patients tighten them);
- Allergies to latex rubber straps.

If a catheter can be secured effectively with a specifically designed device, there is the potential to reduce costs by preventing complications, rather than treating adverse events associated with catheter management (Patronik, 2002).

A specifically designed, commercially produced swivel clip device is available that, when applied to the skin, secures the catheter in position (Fig 1). There is evidence that it is associated with reduced rates of CAUTI (Patronik, 2002) and a reduction in the rate of symptomatic UTIs in patients with catheter-dependent urogenic bladder (Darouiche et al, 2006). The device can be removed from the skin, using alcohol wipes or



FIG 1. SWIVEL CLIP DEVICE

gels or an adhesive remover.

Other adhesive stabilisation devices have recently been made available, including a multi-purpose catheter holder. This holds the catheter in place with a Velcro strap or 'glue well'. However, when a Foley catheter is secured it is vital to allow some movement to prevent tension on the delicate urethral tissue (Wilson, 2009).

IMPLICATIONS FOR PRACTICE

The use of short-term, indwelling urinary catheters is widespread throughout the acute care sector. However, nursing staff should not use

BOX 2. A NURSING CATHETER CARE REVIEW

A review should include:

- A clear rationale for ongoing use of the catheter
- The patient's bladder health status
- How the patient accepts the use of a catheter
- The patient's compliance with catheter care
- Ensuring catheter care is given and that the manufacturer's guidelines are followed
- Review of the impact of the catheter on lifestyle and quality of life
- Review of the frequency of catheter and drainage bag changes and, if this is appropriate
- Review of infection status – check urinalysis

them unless absolutely necessary – and if they must be used, then for as short a duration as possible (Box 1 and 2).

The longer a catheter remains in place, the more likely it is that it will migrate, increasing the risk of infection. The correct fixation technique is critical to help reduce friction and avoid catheter migration (Billington et al, 2008).

Apathy about catheter care is a particular problem in the acute setting. In general, there is

less first-hand experience in acute care with the complications that can arise due to insecure catheter fixation, than in the community.

CONCLUSION

New devices are available to secure catheters. Nurses need to ensure they have access to equipment that can minimise risk to patients (Box 3). ●

BOX 3. CONSIDERATIONS WHEN SELECTING A FIXATION DEVICE

- Be purpose designed to secure the Foley catheter
- Allow security without tension on the urethral tissue
- Suit the patient's lifestyle
- Convenient and uncomplicated to apply

REFERENCES

Patronik, S. (2002) *Eliminating Urinary Tract Infections with the StatLock Foley Catheter Securement Device*. tinyurl.com/catheter-securement

Plowman, R. et al (2001) An economic model to assess the cost and benefits of the routine use of silver alloy coated urinary catheters to reduce the risk of urinary tract infections in catheterised patients. *Journal of Hospital Infection*; 48: 1, 33–42.

Pratt, R.J. et al (2007) epic2: National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England. *Journal of Hospital Infection*; 65S, S1–S64.

RCN (2008) *Catheter Care: RCN Guidance for Nurses*. RCN. tinyurl.com/rcn-cathetercare-guidelines

Skills for Health (2008) *National Occupational Standards. CC03 Care for individuals with Urethral Catheters*. Skills for Health. tinyurl.com/national-occupationalstandard

Wilson, M.R.C. (2009) Biofilm and other causes of pain in catheterisation. *British Journal of Community Nursing*; 14:3, 102–113.

Additional reading

Department of Health (2007) *Saving Lives: Reducing Infection, Delivering Clean and Safe Care*. www.clean-safe-care.nhs.uk

Department of Health (2003) *Winning Ways: Working Together to Reduce Healthcare-associated Infection in England*. London: DH.