Rehabilitation and continence promotion following a stroke

About 100,000 people in England and Wales experience a stroke each year. Nine out of ten strokes affect people aged over 55 years and 300,000 people are living with disability caused by stroke. About a third of people who experience a stroke will die within the first year, one third will make a good recovery and the final third will experience moderate to severe disabilities (Westcott, 2000).

People with severe disability following a stroke require continuing care and many are referred to nursing homes. Research indicates that a year after a stroke almost 70 per cent of people with severe disabilities will require a period of nursing home care (Brown et al, 1999).

Many of the people admitted to nursing homes could, with appropriate acute care and rehabilitation, be enabled to return home. However, if their condition is severe and does not improve, the person may need long-term care in a nursing home. Return to the community is supported by Standard 3 of the National Service Framework for Older People (Department of Health, 2001), which aims to enable early discharge of older people and improved access to intermediate care.

Continence promotion is an important aspect of stroke rehabilitation and the care given in hospitals impacts directly on a person’s ability to regain continence.

The hazards of hospitalisation Following a stroke, older people are often cared for by nurses who do not have specialist expertise in caring for older people. During times of illness and hospitalisation, older people are vulnerable to ‘deconditioning’ – that is, loss of muscle strength and ability to carry out the normal activities of daily living.

During a hospital stay it is suggested that 50 per cent of patients aged 85 and over experience some loss of ability unrelated to their clinical condition. The reasons for this loss of ability include inadequate nutrition, excessive bed rest, complex drug regimes and sleep deprivation (Covinsky et al, 2003).

The NSF for older people recognises the importance of improving nurse education in the care of older people, early discharge from acute hospitals and the need for rehabilitation. It is equally important that nurses in all settings do their best to offer care that aims to rehabilitate their patients.

Assessment and specialist referral Following a stroke, patients with continence problems require careful assessment to identify the underlying cause of their condition. Frequently the cause is associated with the functional consequences of the stroke. However, if the patient shows no sign of regaining continence then his or her symptoms require investigation and referral to a specialist continence service.

Good Practice in Continence Services (DoH, 2000) suggests that assessment should be available at four levels. At level one the assessment can be carried out by a clinician in primary care, residential and nursing homes and in secondary care. This assessment is suitable for patients with symptoms indicating urine storage problems. Patients with voiding and post-micturition symptoms should be referred for a higher level assessment (Colley, 2003).

Why people develop continence problems after a stroke Incontinence is common immediately after a stroke and has been reported in 44-69 per cent of people (Henriksen, 1991; Nakayama et al, 1997). It usually resolves without treatment within eight weeks (Borrie et al, 1986; Brocklehurst et al, 1985). People who experience severe strokes tend to have ongoing continence problems. Three factors affect continence after strokes:

- Physiological changes caused by the stroke;
- Neuropsychological changes affecting bladder function after stroke;
- Factors relating to medical and nursing care, and hospitalisation.

Physiological changes These range from the mild to the severe. Short-term memory can be affected and communication difficulties can include difficulty understanding speech (receptive dysphasia) and problems with speaking (dysphasia and dysarthria). Some individuals lose complete function on one side of the body (hemiplegia); others experience weakness (hemiparesis). Vision may be impaired and visual fields affected. The individual may lose the ability to move unaided, read or communicate needs. These changes can often lead to depression and feelings of despair. It is suggested that continence problems following a stroke are a common by-product of immobility and dependency rather than neurological damage (Fader and Craggs, 2003).

Neurophysiological changes Bladder control is maintained by the parasympathetic nervous system, which is part of the autonomic nervous system. Under normal circumstances we are unaware of any sensation of bladder fullness until it contains about 300ml of urine. Then, we can postpone the need to void until convenient. The micturition centre in the brain stem informs us that our bladder is filling. The micturition centre in the frontal lobe of the cerebral cortex allows us to inhibit urination until it is convenient. The urethral sphincters remain tightly closed, preventing leakage. The correct functioning of the autonomic nervous system and both micturition centres is vital if continence is to be maintained.
A stroke can directly or indirectly affect the frontal or brain stem micturition centres, causing malfunction. The level of damage depends on the severity of the stroke.

Detrusor hyperreflexia is common following a stroke – the person is aware of the need to pass urine but is unable to inhibit bladder contraction. The consequence is frequency, urgency and possible urge incontinence (Fader and Craggs, 2003). Bladder emptying problems may also occur. Detrusor sphincter dyssynergia occurs when the urethral sphincter does not relax as the bladder contracts, resulting in incomplete bladder emptying (Fader and Craggs, 2003).

Nursing and medical care following a stroke

It is important to be aware of the effects of stroke on continence as this can help in the development of a holistic plan to enable the patient to regain continence.

Avoid catheterisation Catheterisation should be avoided in all but exceptional circumstances. Most people will regain continence following a stroke. Brocklehurst et al (1985) found that about 40 per cent of people regain continence during the first two weeks. The presence of a catheter will inhibit this process. If the person is unable to pass urine and has a residual volume of urine in the bladder, intermittent catheterisation can be used to empty the bladder. This has an advantage over indwelling catheters, which can rapidly lead to a reduction in bladder capacity.

Infection is a complication of catheterisation and may persist after a catheter has been removed. This has consequences for patients as infection can cause urinary incontinence. Also, more than three-quarters of people catheterised for three months or more develop inflammatory bladder changes (Ekelund and Johansson, 1979). When the catheter is removed the patient has to regain bladder control as well as communication difficulties after a stroke. In the early stages of regaining continence, patients may experience urgency when they want to pass urine. Consideration is needed to devise strategies to improve communication. For example, patients who find speech difficult can be given a red card to wave when they want to pass urine.

Drug therapy The patient’s drug therapy can contribute to continence problems. Diuretics and muscle relaxants should be prescribed with care and in the lowest possible dose (Nazarko, 1994). Some antihypertensives can disrupt the activities of the autonomic nervous system and cause nocturnal enuresis, and in some cases urinary retention with overflow incontinence.

Bowel management Constipation and faecal impaction can cause or worsen existing continence problems. Encouraging a diet rich in fibre and a fluid intake of at least 1.5 litres per day can help to prevent constipation. If swallowing is difficult, pureed fruits and vegetables can be offered. Nursing measures to enable the person to maintain or re-establish normal bowel patterns can virtually eliminate the use of laxatives and rectal interventions (Nazarko, 1996).

Conclusion Continence promotion is an important part of stroke rehabilitation. High quality care focusing on early rehabilitation reduces the risk of adverse outcomes such as pressure ulcers, immobility and incontinence, and improves quality of life. Sensitive research-based care minimises disability following a stroke and reduces the risk of a person requiring long-term care.