Advances in prevention and treatment of stroke and TIA

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There is increasing recognition of the importance of stroke prevention and effective treatment and management of people who have had a stroke or transient ischaemic attack. This has led to the development of a range of service developments across all health care settings, which are bringing exciting and challenging opportunities for nurses.

This article highlights key clinical developments in stroke prevention and treatment, and outlines some of the roles open to nurses who wish to become involved in stroke care provision.

Stroke is the third biggest killer in the UK, behind heart disease and cancer (Wolfe et al, 1996), and the single largest cause of serious disability. A transient ischaemic attack (TIA) is a temporary, stroke-like event in which symptoms last no longer than 24 hours. A TIA increases the future risk of stroke sevenfold (ONS, 2001).

The cost of stroke is enormous – the Stroke Association (1997) estimated it cost the NHS and social services £2bn to provide long-term care and support to people who survived stroke in the mid-1990s. This is set to rise, for two reasons.

The risk of stroke increases with age – 80 per cent of strokes occur in people over 65 – so the ageing population means incidence of stroke is likely to increase. Also stroke mortality is decreasing, so the number of people requiring long-term care after stroke is likely to increase (Dighe et al, 1997).

However, stroke is not only costly to health and social services, it also has a huge impact on the survivors and their families – both in financial and human terms. Survivors and family members may lose earning potential as a result of disability caused by stroke or the need to care for the person who has had a stroke.

In addition, disabilities and lost independence can significantly reduce quality of life for many patients, family members’ lifestyles may be curtailed by caring responsibilities, and family relationships may be negatively affected.

Service developments

The National Service Framework for Older People (DoH, 2001) was introduced to improve care for older people. One of its aims was to improve all aspects of clinical care and service delivery in relation to the prevention and management of stroke.

It set a target that by April 2004 all patients who have a stroke or TIA should be seen by experts in a range of specialised stroke services. In many areas this has not been achieved. However, together with individual disciplines and groups such as the Intercollegiate Stroke Working Party (ISWP), the NSF has had a marked impact on stroke services and over the last four years the proportion of hospitals with specialist stroke units has increased from 45 per cent to 73 per cent (DoH, 2003).

As stroke is placed higher on the health agenda, exciting opportunities are being created for nurses. These include the relatively new role of consultant nurse and opportunities in many different settings to both specialise and prescribe, offering nurses a key role in all aspects of the care and management of patients who have had a stroke or TIA.

Advances in stroke treatment, particularly in the acute phase, are being made and pharmaceutical companies are investing in a range of potential new therapies (ABPI, 1999). For example, data from the MATCH trial (Diener et al, 2004) was presented at the European Stroke Congress, highlighting the appropriate management for high-risk stroke and TIA patients. In addition, thrombolysis for the treatment of acute ischaemic stroke was granted a temporary licence last year.

Learning objectives

Each week Nursing Times publishes a guided learning article with reflection points to help you with your CPD. After reading the article you should be able to:

- Understand the impact of stroke and TIA on survivors and their families;
- Understand the service developments required for stroke and TIA;
- Explain the prevention and management strategies for primary, acute and long-term care;
- Appreciate the potential contribution of nurses to stroke and TIA services.

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Primary prevention
Prevention is a key priority in stroke-related care. Primary care nurses are playing a vital role in prevention initiatives in a range of areas, including health education programmes focusing on how people can reduce their risk factors for stroke by changing their lifestyle (Box 1). These messages are not only relevant to people in at-risk age groups, as it is preferable for healthy lifestyles to be adopted at as young an age as possible. All nurses in primary care, including school nurses, can therefore be involved in stroke prevention by undertaking health education.

The quality framework of the General Medical Service contract awards points, which equate to funding, to GP practices for providing enhanced services such as recording the smoking status of their patients (aged 17–75) and blood pressure readings. Points are also available for providing smokers with literature and services to encourage them to quit (NHS Confederation, 2004). Practice nurses are playing a major role in stroke prevention by coordinating smoking cessation services as well as providing cardiac health and diabetes clinics, helping to reduce the number of patients at high risk of coronary and neurological events.

Acute management
For patients who have had a stroke or TIA, the provision of organised stroke services is vital. Effective early management of acute stroke and TIA not only reduces mortality and morbidity, it also makes the most efficient, cost-effective use of limited NHS and social services resources. NHS Direct staff and nurses working in A&E departments have a key role to play in signposting patients to appropriate services, facilitating early diagnosis and initiating prompt treatment.

The revised ISWP guidelines (2004) recommend that patients who have had a TIA should be investigated by a specialist service within seven days. These patients are at high risk of having a stroke in the following month and it is imperative they are managed effectively. Without treatment, one-quarter will have a stroke (ISWP, 2004).

Stroke constitutes a medical emergency. Damage can be minimised with early diagnosis and active management in the initial hours after onset (ISWP, 2004). Patients should therefore be admitted to hospital as soon as possible so that a specialist team can provide acute care and carry out assessments for rehabilitation.

Evidence shows that patients benefit from specialised care (ISWP, 2004) and it is important that those who have had a stroke are optimally managed to reduce the risks of further vascular events and post-stroke complications such as deep vein thrombosis and aspiration pneumonia.

<table>
<thead>
<tr>
<th>BOX 1. RISK FACTORS FOR STROKE</th>
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<tbody>
<tr>
<td>● Hypertension</td>
</tr>
<tr>
<td>● Smoking</td>
</tr>
<tr>
<td>● Drinking alcohol excessively or binge drinking</td>
</tr>
<tr>
<td>● Obesity</td>
</tr>
<tr>
<td>● Lack of exercise</td>
</tr>
<tr>
<td>● Eating an unhealthy diet</td>
</tr>
<tr>
<td>● Substance misuse</td>
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<tr>
<td>● Poor control of diabetes</td>
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Source: www.stroke.org.uk

Following a diagnosis of ischaemic stroke using computerised tomography (CT) scanning of the brain, aspirin (300mg) should be given as soon as possible. Aspirin (50mg–300mg) daily should be continued until an alternative antiplatelet therapy is started. Anticoagulation therapy should not be used routinely in cases of acute ischaemic stroke (ISWP, 2004).

Secondary prevention
Patients who have had one stroke are at increased risk of a second stroke, while the risk of stroke in the first month after a TIA can be as high as 20 per cent, emphasising the need for rapid assessment and management. Patients with stroke and TIA are also at increased risk of myocardial infarction (MI) and other vascular events (ISWP, 2004).

Patients should be given lifestyle management advice and pharmacological interventions should be used where appropriate to decrease blood pressure (to <140mmHg/<85mmHg in those without diabetes and to <130mmHg/<80mmHg for those with diabetes). Patients with a total cholesterol >3.5mmol/L should be prescribed a statin, while all those who are not on anticoagulation therapy should be given an antiplatelet agent such as aspirin (50mg–300mg daily), clopidogrel (75mg daily) or low-dose aspirin and modified-release dipyridamole. Those with persistent or paroxysmal atrial fibrillation should be given anticoagulation therapy unless it is contraindicated, in which case they should receive an antiplatelet agent (ISWP, 2004).

Advances in antiplatelet therapy
The CAPRIE (1996) study showed that clopidogrel was more effective than aspirin at reducing the combined risk of major atherothrombotic events in patients with recent MI, ischaemic stroke or peripheral arterial disease. The study data also showed that the benefits of clopidogrel over aspirin were amplified in subgroups of high-risk

REFERENCES


Guided reflection

Use the following points to write a reflection for your PREP portfolio:

- Explain why you read this article and its relevance to your practice;
- Summarise the main points of the article;
- Identify a new piece of knowledge you learnt about stroke and TIA;
- Consider how you will use the article to develop your practice;
- Explain how you will follow up what you have learnt from this article.

Long-term care

Long-term rehabilitation and support for people who live for many years with the effects of their stroke, either at home or in residential care, is sadly lacking. The problems and effects associated with stroke may change over time and require reassessment and specialist advice. For example, people may need help with seating and posture management, tonal abnormalities, gate re-education and psychological effects. Stroke survivors also report a lack of advice on relationship issues, returning to driving or leisure activities.

Nurse specialists and consultants

The number of stroke nurse specialists and consultant stroke nurses is steadily rising, placing stroke nursing firmly on the map. A National Stroke Nursing Forum has been formed, providing a network for professionals with an interest in stroke nursing. However, nurses in all settings meet people whose lives have been affected by stroke, and while specialist posts are important, all nurses need up-to-date knowledge of stroke care and management. They must also know how to access local expertise and services.

Neurovascular clinics for the investigation, diagnosis and treatment of patients with symptoms of stroke or TIA are being operated by highly trained and skilled nurses working alongside stroke physicians and other specialists. These services are having a real impact on reducing morbidity and mortality through primary and secondary prevention measures. Nurses also provide support and advice to the often overlooked psychological aspects experienced by stroke survivors and their families.

Conclusion

Stroke and TIAs are medical emergencies requiring rapid diagnosis and specialist management to minimise their long-term effects and reduce the risk of further vascular events. TIAs must be recognised as a warning sign of impending stroke and appropriate investigations and treatment instigated.

The management of patients who have had a stroke comprises acute care followed by a period of rehabilitation either at home or within another setting. Nurses are ideally placed to oversee this continuation of care and to address the physical and emotional well-being of people who have experienced stroke or TIA, helping people to lead as independent a life as possible.

Evidence clearly shows that stroke units and specialised care provide the best outcomes for patients with strokes or TIAs. As these services are developed, there are huge opportunities for nurses to specialise and to take leading roles in the management of patients with strokes and TIAs.