AUSTRALIAN RESUSCITATION COUNCIL

NEW ZEALAND Resuscitation Council WHAKAHAUORA AOTEAROA

ANZCOR Guideline 9.2.2 – Stroke

Guideline

Who does this guideline apply to?

This guideline applies to adult and child victims.

Who is the audience for this guideline?

This guideline is for use by bystanders, first aiders and first aid providers.

1 Introduction

Stroke (previously known as cerebrovascular accident) is the second most common cause of death after heart disease.[1,2,3,4,5]. A stroke **occurs when the supply of blood to part of the brain is suddenly disrupted** or when spontaneous bleeding from a blood vessel within the skull occurs. Approximately 80% of strokes are caused by an acute blockage of a blood vessel supplying part of the brain. Stroke is a medical emergency.

When stroke is caused by an interruption to the blood supply to a part of the brain, that area of the brain is damaged and may die. The surrounding brain tissue is also affected and is at risk of dying. However, if the blockage can be rapidly cleared and blood supply restored, the amount of damage to brain tissue can be significantly reduced. Rapid recognition, protection and support of the airway, breathing and circulation, and rapid access to definitive stroke care can all contribute to reducing deaths and long term damage from stroke.[2,3]

2 Recognition

A sudden blockage of blood flow to an area of the brain, or bleeding, will produce symptoms of stroke. Symptoms may seem to improve but should still be considered as a stroke.

First aid providers can use stroke assessment systems such as **FAST** for individuals with suspected acute stroke (CoSTR 2015, strong recommendation, low quality evidence)[6]. FAST is a simple way for remembering the signs of stroke.[2,3,,6,7]

- **F**acial weakness - can the person smile? Has their mouth or eye drooped?
- **A**rm weakness - can the person raise both arms?
- **S**peech difficulty - can the person speak clearly and understand what you say?
- **T**ime to act fast – seek medical attention immediately – Call for an ambulance.

Other common symptoms of strokes include:

- numbness of the face, arm or leg on either or both sides of the body
- difficulty swallowing
- dizziness, loss of balance or an unexplained fall
- loss of vision, sudden blurred or decreased vision in one or both eyes
- headache, usually severe and of abrupt onset or unexplained change in the pattern of headaches
- drowsiness
- confusion
- reduced level of consciousness.

Symptoms of stroke may also be caused by other conditions such as epilepsy, migraine or diabetes with low blood sugar. If trained to check a blood sugar level, this can improve the accuracy of stroke diagnosis when used in conjunction with a stroke assessment tool (CoSTR 2015: weak recommendation/low quality evidence) [6].

When there is doubt over diagnosis, the victim should be managed as having a stroke until proven otherwise.

A victim with the symptoms of stroke should be transported by ambulance because paramedics can start the management of stroke and make sure the victim is taken to the most appropriate hospital for specialist stroke management. Paramedics can also notify the receiving hospital, reducing time to the start of treatment.

3 Management

- Call an ambulance for any victim who has shown signs of stroke, no matter how brief or if symptoms have resolved.
- Do not give anything to eat or drink.
- Administer oxygen if available and trained to do so (ANZCOR Guideline 9.2.10). If a pulse oximeter is available, oxygen should only be administered to victims with oxygen saturation < 94%.
- Provide reassurance.
- If the victim is unconscious but breathing lay victim on the side and ensure airway is clear (ANZCOR Guideline 3).
- If the victim is unresponsive and not breathing normally, commence resuscitation following the Basic Life Support Flowchart (ANZCOR Guideline 8).

References

1. AIHW: Senes S (2006). How We Manage Stroke in Australia. AIHW cat. no. CVD 31. Canberra: Australian Institute of Health and Welfare.

2. National Stroke Foundation. Clinical Guidelines for Stroke Management 2010. Melbourne Australia. www.strokefoundation.com.au Accessed 19/11/2015

3. Stroke Foundation of New Zealand and New Zealand Guidelines Group. Clinical Guidelines for Stroke Management 2010. Wellington: Stroke Foundation of New Zealand; 2010. http://www.stroke.org.nz Accessed 16/12/2015. http://www.health.govt.nz/publication/new-zealand-clinical-guidelines-stroke-management-2010 Accessed 18/12/15

4. Hankey GJ et al. Long-term disability after first-ever stroke and related prognostic factors in the Perth Community Stroke Study 1989-1990. Stroke 2002;33:731-735.

5. Johnston et al. Validation and refinement of scores to predict very early stroke risk after transient ischaemic attack. Lancet 2007; 369:283-292.

6. Zideman, D. A., Singletary, E. M., De Buck, E.,et al. (2015). Part 9: First aid: 2015 International Consensus on First Aid Science with Treatment Recommendations. *Resuscitation, 95*, e225. http://www.cprguidelines.eu/assets/downloads/costr/S0300-9572(15)00368-8_main.pdf Accessed 19/11/2015

7. Nor AM, McAllister S, Louw J, Dyker G, Davis M, Jenkinson G, Ford A. Agreement Between Ambulance Paramedic and Physician-Recorded Neurological Signs With Face Arm Speech Test (FAST) in Acute Stroke Patients. Stroke 2004; 35(6): 1355-1359

Further Reading

ANZCOR Guideline 2 Managing an Emergency

ANZCOR Guideline 3 Recognition and First Aid Management of the Unconscious Victim

ANZCOR Guideline 4 Airway

ANZCOR Guideline 5 Breathing

ANZCOR Guideline 8 Cardiopulmonary Resuscitation