Fact Sheet

Queensland Spinal Cord Injuries Service

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Information for General Practitioners:
Autonomic dysreflexia and blood pressure management after spinal cord injury (SCI)

This fact sheet outlines:

- The causes and clinical presentations of blood pressure issues that commonly occur after SCI, including autonomic dysreflexia and orthostatic hypotension
- How to access specialist medical information and advice to assist in blood pressure management for people with SCI

Background:
Blood pressure regulation may be affected by an SCI. People with tetraplegia and high thoracic paraplegia often have resting blood pressures of 15 to 20 mmHg lower than able-bodied individuals. Autonomic dysreflexia and orthostatic hypotension are common and can decrease quality of life and increase cardiovascular risk. The effects of medications, ageing and medical conditions unrelated to SCI also need to be considered.

Autonomic Dysreflexia (AD):
AD is a medical emergency characterised by acute elevation of arterial blood pressure greater than 20mmHg above the resting systolic blood pressure. It occurs in individuals with an SCI at or above T6 due to unregulated sympathetic activity below the level of injury in response to an inciting stimulus. Symptoms range in severity and may include pounding headache, sweating, chest tightness, blurred vision, nasal congestion, piloerection, bradycardia, vasodilation 'rash' (redness above level of injury) and anxiety. Untreated episodes can result in stroke, seizures, myocardial infarction and death.

The cause for AD is most commonly bladder, bowel or skin complications but it can occur with any potentially irritating stimulus. People with SCI should be educated to recognise AD early and to seek urgent medical treatment. Patients and carers can often suggest the cause. Wallet-sized AD management cards are available, as local health services may not be experienced in its management.

Orthostatic Hypotension (OH):
A drop in blood pressure with postural change can occur in people with SCI due to a complex combination of autonomic nervous system dysfunction, loss of the skeletal muscle pump, altered salt and water balance and cardiac deconditioning. Symptoms include light-headedness, blurred vision, fatigue, muscle weakness and syncope. The ability to participate in rehabilitation programs and daily activities can be severely impaired by OH.

The management of OH comprises of non-pharmacological and pharmacological strategies. Patients require education on provoking factors, ensuring adequate fluid intake, avoidance of diuretics and postural management of pre-syncopal symptoms. Discontinuation of medications with hypotensive effects should occur, where possible, and the use of compression stockings or abdominal binders is common. If conservative measures are ineffective, pharmacological measures may be appropriate. Pseudoephedrine and fludrocortisone are usually trialled in consultation with a specialty medical team experienced in their use.

How to access to specialist medical advice:
In an emergency, patients should attend their nearest hospital emergency department. For urgent advice after hours, the on-call spinal rehabilitation consultant/registrar can be contacted through the PA Hospital switchboard. For non-urgent SCI issues, the SIU Outpatient Department can be contacted on 3176 2641 during business hours. QSCIS clients who require an outpatient appointment but have not been seen for over 12 months require a new referral via the Metro South Central Referral Hub.

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