Autonomic Dysreflexia: An Update, How Serious Is It?

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ANCC MAGNET RECOGNITION

Autonomic Dysreflexia (AD) is a medical emergency for individuals who have sustained a spinal cord injury (SCI) at or above the thoracic sixth vertebrae (T-6), which can cause complications with seizures, stroke, cardiac complications or death if not treated. The general public, family physicians, non-rehabilitation hospitals, Emergency Departments and rehabilitation hospitals for spinal cord injury play a crucial role in maintaining the health care and well-being for SCI individuals. Male-to-female ratio for SCI is 4:1; however AD is not sexually predetermined. SCI complete injuries (no motor or sensation) have a higher risk for experiencing AD, 91% vs 27% for incomplete SCI.

Background into spinal cord injury

Although motor vehicle crashes are still the most common cause of SCI, an alarming rate of falls in the elderly (individuals over the age of 60) over the past three decades by far are the fastest growing age group of individuals sustaining spinal cord injuries. Cervical injuries are greater than 56.5%. Individuals are presenting with cervical stenosis and often require rehabilitation for a SCI due to injury to the spinal cord. Increasing knowledge for individuals at risk with a SCI at or above T-6, medical staff, family members, care providers and the general public is critical to maintaining the health and well-being of individuals who are at risk for AD.

Spinal Cord Injury At Risk Population Epidemiology:

- Approximately 12,000 new cases in the U.S. yearly
- Prevalence of SCI in U.S. ranges from 238,000 to 332,000
- More than 65% of newly injured individuals survive
- Most common injuries result from
  - Motor vehicle accidents
  - Violence
  - Sports injuries (increasing numbers of SCI with winter sports [skiing])
  - Falls (fastest growing age group sustaining SCI in the last three decades)
- Male individuals comprise a 71% risk factor

Pathophysiology with AD:

- Noxious stimulus causes a peripheral sympathetic response
- Vasoconstriction below the level of injury
- Epinephrine and norepinephrine release into systemic circulation
- Baroreceptors in carotid sinus and aortic arch; strong vagal (CN X) outflow, bradycardia, and vasodilation above level of injury
- Strong inhibitory response to sympathetic response blocked by injury level
- Lack of response to cause desired effect-lower blood pressure

Signs and Symptoms of Autonomic Dysreflexia:

- B/P elevation of 20-40mm Hg above resting B/P
- Pounding headache
- Bradycardia (relative to resting heart rate)
- Flushing of face
- Profuse sweating above level of lesion
- Pale, cold skin and piloerection below the level of lesion
- Blurred vision, Shortness of Breath, Anxiety, & Nasocongestion

Role(s) of SCI Care Providers:

- Monitor vital signs and assess for AD when signs & symptoms present
- Educate patient, family members and care providers
- Collaborate with Physicians, Nursing staff throughout facility who provide
- Educate Providers and Nursing staff on critical care Nursing Units
- Continue to follow patients when transferred to critical care Nursing Units
- Maintaining a continuum of care throughout disciplines

Education for Patients, Significant Others & Family Members:

- What do the patient and family need to know?
- Signs and symptoms of AD
- Resting blood pressure (vital for care provider & patient to know)
- Causes of AD
  - Bladder or Bowel, urinary tract infection, bowel distention / impaction
  - Deep vein thrombosis, pulmonary emboli, temperature fluctuations
  - Skin, pressure ulcer, ingrown toe nail, clothing, scrotal compression
  - Sexual stimulation, menstruation, vaginitis, childbirth
  - Heterotopic bone, fractures or skeletal trauma
- Medication to administer if unable to resolve AD
- Medical emergency dial 911

Education for Medical Staff:

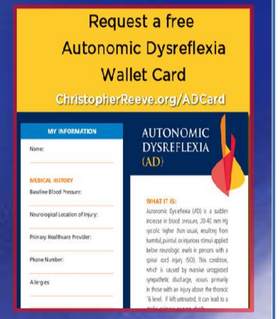
- Emergency Rooms
- Operating Rooms
- Community Health Care Centers
- Nursing Intensive Care Units
- Spinal Cord Injury Nursing Units

***Aging-related and geriatric consideration for rehabilitation will be a major focus for SCI.

Our hands guide research, which influences change in practice and improves care, outcomes, and satisfaction for our patient population!

Outcomes:

- Maintains current best nursing practice / knowledge
- Increased recognition of signs and symptoms of AD by Nursing staff
- Improved and effective treatment to resolve episodes of AD
- Increased quality of care for SCI patients
- Increases patient satisfaction and confidence in nursing practice
- Maintains safe nursing practice



What Is Being Learned:

- Nursing research continues to influence/guide nursing practice
- Maintaining current best-practice is vital to delivering cost effective care
- Best-Practice decreases the risk of harm or injury to patients
- Literature review maintains nursing standards of care
- Knowledge increases continuity of care in prevention of AD

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