How to ensure patient observations lead to effective management of altered consciousness

Altered consciousness is a sign of patient deterioration. It is essential that nurses are capable of promptly identifying and acting on this significant observation.

Patients who are critically ill usually display the following clinical signs that indicate compromised respiratory, cardiovascular and/or neurological functions (Nolan et al, 2005):

- Tachypnoea;
- Tachycardia;
- Hypotension;
- Altered consciousness level (Resuscitation Council UK, 2006).

Managing altered level of consciousness

DEFINITION OF ALTERED CONSCIOUSNESS

Level of consciousness has been described as the degree of arousal and awareness (Geraghty, 2005).

Altered level of consciousness is considered an adverse sign and may be an indication that the patient is critically ill (Jevon, 2009). It can present in a variety of different ways including confusion, drowsiness, vagueness and aggressive behaviour. The causes are listed in Box 1.

The onset of altered level of consciousness may be sudden – for example, following an acute head injury – or it may be gradual as a consequence of medical problems such as hypoxia or hypoglycaemia (Geraghty, 2005).

ASSESSING CONSCIOUSNESS LEVEL

Level of consciousness can be assessed by observing patients' behavioural response to different stimuli (Waterhouse, 2005). A variety of scales have been designed to assess these responses.

During the initial rapid assessment of critically ill patients it is helpful to use the AVPU scale (Box 2), together with an examination of the pupils, to determine the level of consciousness (Jevon, 2008).

Any abnormal changes in pupillary reaction, pupil size or shape, together with other neurological signs, are an indication of raised intracranial pressure and compression of the optic nerve (Mooney and Comerford, 2003). Raised intracranial pressure can also lead to a fall in respiratory and heart rates and a rise in blood pressure.

BOX 1. CAUSES OF ALTERED CONSCIOUSNESS

Causes include:
- Hypoxia;
- Hypercapnia (high levels of CO₂ in the blood);
- Cerebral hypoperfusion;
- Medications such as sedatives or analgesics;
- Hypoglycaemia;
- Drug overdose;
- Stroke;
- Subarachnoid haemorrhage;
- Convulsions;
- Alcohol;
- Head injury.

Sources: Jevon (2008); Resuscitation Council UK (2006)

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Glasgow Coma Scale

The Glasgow Coma Scale (GCS, see Table 1) was originally developed to grade the severity and outcome of traumatic head injury (Teasdale and Jennett, 1974). It assesses the two aspects of consciousness:

- Arousal or wakefulness: being aware of the environment;
- Awareness: demonstrating an understanding of what the nurse has said through an ability to perform tasks (Jevon, 2008).

The 15 point scale assesses level of consciousness by evaluating three behavioural responses: eye opening, verbal response and motor response (Waterhouse, 2005). It should be used as part of a full patient assessment to more specifically measure level of consciousness (Smith, 2003). It should also be used when assessing patients with head injuries (NICE, 2007).

MANAGING ALTERED LEVEL OF CONSCIOUSNESS

Nurses should:

- Assess patients following the ABCDE approach to ascertain whether they are critically ill;
Ensure they have a clear airway and assess whether breathing is adequate (normal rate, depth and rhythm). The most common cause of airway obstruction in hospital is altered level of consciousness, leading to structures in the mouth (for example, the tongue and epiglottis) blocking the airway (Jevon, 2008).

For those who are critically ill, administer oxygen as prescribed (see Jevon, 2009); monitor vital signs and complete the early warning scores (EWS) chart following local protocols, calling for senior help if necessary. It is important to adjust the frequency of EWS observations as appropriate for each patient following local protocols.

Review airway, breathing and circulation (Wyatt et al, 2006). A compromised airway, inadequate breathing or inadequate circulation can lead to altered level of consciousness. Exclude or treat hypoxia, hypercapnia and hypotension (Resuscitation Council UK, 2006);

initially assess the patient’s level of consciousness using the simple AVPU scale (see Box 2). Record the GCS if they have a head injury (NICE, 2007) and, if necessary, as part of the full patient assessment to provide a more specific measurement of level of consciousness (Smith, 2003);

If the patient has altered level of consciousness, consider placing them in the lateral (recovery) position. This will protect the airway from occlusion by the tongue, regurgitation of gastric contents or debris in the mouth (Jevon, 2008);

If the patient is unconscious an oropharyngeal airway may be inserted; tracheal intubation could be required; if the patient is semiconscious and having difficulty maintaining a patent airway, a nasopharyngeal airway may be inserted; examine the pupils (size, equality and reaction to light). Interpret the pupillary size and response to light; it is important to understand the clinical significance of abnormal pupil size and response to light reflex and react according to local escalation protocols (Department of Health, 2008);

Exclude hypoglycaemia; perform bedside blood glucose measurement. Nurses should have the knowledge to interpret the blood glucose value and should, if necessary, initiate the local protocol for hypoglycaemia (DH, 2008). Administering oral glucose may be sufficient to manage the condition but in some situations, intravenous dextrose will be required (Smith, 2003). It is also important to exclude hyperglycaemia as diabetic ketoacidosis can lead to altered level of consciousness;

Exclude reversible drug-induced causes. Administer the appropriate antagonist if available such as naloxone for opioid toxicity (Resuscitation Council UK, 2006).

### CONCLUSION

Altered level of consciousness is a common clinical sign associated with critical illness. Since it can be potentially life threatening, the initial priorities are to ensure a clear airway, that the patient’s breathing and circulation are adequate and where possible, to identify and treat the underlying cause.

### REFERENCES


tinyurl.com/competencies-acute-illness


http://www.nice.org.uk/CG56


