



Core subject: Medical Emergencies

Keep calm and carry on

Medical emergencies in surgery include panic attacks

Author: Wendy Berridge

CPD: 1 hour

Educational aims and objectives

This article tackles procedures and protocols for panic attacks in surgery. It talks about the symptoms, scientific/biological reasons and how to deal with them.

Anticipated outcomes

The reader will leave with a far greater understanding of panic attacks and how to deal with these medical emergencies in practice.

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Keep calm and carry on

Medical emergencies in surgery include panic attacks, says **Wendy Berridge**

HYPERVENTILATION (PANIC ATTACK)

Definition: Breathing at an abnormally rapid rate while at rest. Hyperventilation is literally 'excessive breathing'. When we breathe in, there is only a trace of carbon dioxide in the air. When we breathe out, we breathe out 4% carbon dioxide. Hyperventilating results in low levels of carbon dioxide in the blood, which causes the signs and symptoms of this condition.

A hyperventilation attack can often result from anxiousness, or a sudden fright. The condition of hyperventilation is often mistaken for asthma. Asthmatics may hyperventilate immediately after an inhaler has taken effect by opening the airway, however the difference between the two conditions is that large volumes of air can be heard entering the lungs during hyperventilation, compared with the tight wheeze of the asthmatic.

A panic attack can also occur at any time – it can occur when people are alone, in public, or even when they are asleep. There is often no known trigger. Panic attacks usually begin very suddenly, reach a maximum intensity after about 10 minutes and then slowly subside over the next 30 minutes.

Respiration is an important system in the maintenance of blood pH, (which is

slightly alkaline with a pH of 7.4) and the levels of carbon dioxide in the body have a direct effect on this level. A decreased or low pH is called 'acidosis' and a rise in pH is called 'alkalosis'. If there is a reduction

in carbon dioxide in the body, this will cause the blood pH to rise producing an alkalosis. This begins to have an effect on the body's metabolism and one of the first things to be affected is the drop



DON'T PANIC!

- When the patient is calm, it is helpful to identify the triggers.
- Use the mind's cognitive powers to reverse the effects by recognising that no specific threat exists
- Breathing awareness helps
- Allow the patient to lie in a semi-reclined position
- The use of restful music is an aid
- Talking quietly and calmly to the patient may also be useful – some people find this an irritating distraction and it is best to ask the person beforehand
- Sedation may be required
- Referral for behavioural therapy may also be beneficial

SIGNS AND SYMPTOMS

- Unnaturally deep, fast breathing
- Dizziness, weakness
- Feeling of a 'tight' chest
- Muscle spasms and cramps, (often felt as 'pins and needles') typically in the hands and feet
- Sweating
- Increased heart rate (tachycardia), palpitations
- Loss of consciousness is uncommon, but can occur.

in the available level of calcium to be used by the nervous system. If a person hyperventilates they 'blow off' far too much carbon dioxide, this raises the blood pH and lowers the calcium concentration, resulting in muscle spasms and sensory disturbances such as tingling.

MANAGEMENT

It is essential to reduce the rate and increase the depth of respiration. Be firm and calm, but reassuring, asking the

casualty to concentrate on breathing slowly. The levels of carbon dioxide can be raised further by asking them to hold their breath for as long as possible, or by 're-breathing' their expired air as this has higher carbon dioxide levels.

The simplest re-breathing method is to ask the casualty to breath in and out of their cupped hands that are placed around the mouth and nose. Another effective method is to use the non-rebreathing face mask, without turning the oxygen on, taking care not to cover the air holes with your fingers. This has the added benefit of persuading the casualty to take long, slow breaths, as they will think that they are receiving oxygen. Once the breathing rate has slowed sufficiently the mask can be removed. Another method is to use a paper bag, although they are not always available, and some authorities suggest that there is a risk of hypoxia with this method.

REASSURANCE

As the carbon dioxide level rises the

symptoms will disappear very quickly, especially the sensory symptoms. It is important to remember that the symptoms are very frightening and distressing for the casualty, so it is therefore essential to constantly reassure them that the symptoms will resolve soon and that nothing serious is happening.

If the chest pains remain, or if you are in doubt, ring for medical advice. **CPD**

AUTHOR

Wendy Berridge has worked within the dental profession for over 26 years and delivers CPR, medical emergencies and defibrillation training to dental practices within Yorkshire and Lincolnshire. sAll training qualifies

for verifiable CPD and meets with current UK Resuscitation Council and GDC guidelines. It takes place at each individual practice, allowing for a personal approach, and resulting in a more relaxed atmosphere.

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