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CPD questions

This article has four CPD questions attached to it which will earn you one hour of verifiable CPD. To access the **free** BDA CPD hub, go to <http://bit.ly/2e3G0sv>

What are the common medical emergencies?

- Anaphylaxis
- Angina pectoris
- Asthma
- Choking
- Fainting (syncope)
- Heart attack (myocardial infarction)
- Hypoglycaemia
- Seizure.

Anaphylaxis

Description

A severe, life-threatening, generalised or systemic hypersensitivity reaction – the extreme end of the spectrum, occurring when the body's immune system reacts inappropriately to the presence of a substance that it wrongly perceives as a threat.

Presentation

Characterised by rapidly developing life-threatening airway and/or breathing and/or circulation problems usually associated with skin and mucosal changes:

- Life-threatening Airway: swelling of the face/throat/tongue, hoarse voice, stridor, difficulty swallowing
- Life-threatening Breathing: increased respiratory rate, wheeze, cyanosis
- Life-threatening Circulation: pale skin, clammy, low blood pressure, faintness, drowsiness, collapse.

Medical emergencies:

refresh your knowledge

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Treatment

- Phone 999 or 112 and say 'anaphylaxis'
- Adrenaline (intramuscular - IM) using a blue needle (or a green needle if the person is obese). The dose is repeated if necessary at five minute intervals according to the patient's condition (Table 1)
- Adrenaline auto-injectors
- Oxygen - 15 litres per minute with a non-rebreather mask and reservoir
- Patient positioning – a patient with an airway or breathing problem should sit up. However, any patient who collapses, or is shocked, or who feels faint or light-headed, must be laid flat (with legs raised) and kept in that position until his/her blood pressure has returned to normal.

Angina pectoris

Description

Angina pectoris occurs when one or more of the coronary arteries become narrowed.

Presentation

A manifestation of angina pectoris is chest pain on exertion. The signs and symptoms are similar to a heart attack:

- Pain in the chest/arm or arms/back/throat and lower jaw

Asthma

Description

Asthma is characterised by a narrowing of the small airways with or without excess mucous production.

Asthma UK recommends the following steps to patients in the event of an asthma attack:

- 1 Sit up – don't lie down. Try to keep calm
- 2 Take one puff of your reliever inhaler (usually blue) every 30-60 seconds, up to a maximum of 10 puffs
- 3 If you feel worse at any point while

- Decreased level of consciousness
- Poor respiratory effort
- Little or no response to inhaler therapy.

Treatment

- Phone 999
- Oxygen - 15 litres per minute with a non-rebreather mask and reservoir
- Salamol inhaler - Administer up to 10 doses of Salamol (using a large-volume spacer device if the patient is unable to use the inhaler effectively) and repeat every ten minutes if necessary.

'A PATIENT WITH AN AIRWAY OR BREATHING PROBLEM

SHOULD SIT UP. ANY PATIENT WHO COLLAPSES, OR IS

SHOCKED, OR WHO FEELS FAINT OR LIGHT-HEADED

MUST BE LAID FLAT (WITH LEGS RAISED)...'

- Breathlessness
- Feeling dizzy or sick
- Looking pale/grey/blue.

Treatment

- 300 mg aspirin (unless allergic)
- Rest – ask the patient to sit down
- GTN spray - administered under the tongue and the patient should then close his/her mouth to retain the spray. The initial dosage is 1 or 2 metered sprays (400 micrograms per dose spray) then the patient should be reassessed after five minutes. This dosage can be repeated every 5-10 minutes as clinically indicated
- Phone 999 or 112 if the patient's condition deteriorates or does not improve (this may now be a heart attack).

you're using your inhaler OR you don't feel better after 10 puffs OR you're worried at any time, call 999 for an ambulance

- 4 If the ambulance is taking longer than 15 minutes you can repeat step 2.

NOTE: This asthma attack information is not designed for people using a SMART or MART medicine plan.

(From www.asthma.org.uk.)

Presentation

A severe asthma attack is one that comes on very quickly and worsens very quickly. Signs of **life-threatening asthma** include any **one** of the following:

- Blue tinges at the extremities/lips/earlobes
- Exhaustion
- Confusion

Choking

Description

Complete airway obstruction.

Presentation

The patient:

- May put their hands up to their chest or throat
- Will panic
- Will use their accessory muscles of respiration.

Treatment

- Confirm choking by asking 'Are you choking?'
- Position the patient by leaning them forward
- Deliver: back blows – up to five, then abdominal thrusts – up to five (repeat as necessary). Use back blows and chest thrusts in babies less than one year of age
- Unconsciousness: if the patient becomes unconscious, phone 999 or 112 and start CPR.

**'THE GOLDEN RULE OF ANDERSON IS IF YOU
HAVE A HIGH INDEX OF SUSPICION THAT
SOMETHING IS CLEARLY WRONG,
THEN PHONE 999 OR 112 AND SAY SO!'**

Fainting (syncope)

Description

Fainting is a defence mechanism employed by the brain, when the blood and oxygen supply to the brain becomes too low. A trigger causes the nervous system to temporarily malfunction, leading to a drop in heart rate and blood pressure.

Presentation

The person may:

- Feel light-headed or dizzy
- Become very pale
- Have ringing in their ears
- Yawn
- Feel weak
- Give little or no warning at all!

Treatment

- Oxygen - 15 litres per minute with a non-rebreather mask and reservoir

- Keep the person on the floor (consider the recovery position)
- If a person feels faint (but hasn't fainted) lay the person down and raise the legs
- After fainting, the person should return to normal fairly quickly
- Phone 999 or 112 if the person does not recover after a few minutes
- Repeated episodes of fainting need medical follow-up.

Check for the presence of a very slow heart rate (<40 per minute) which may drop the blood pressure. This is usually caused by a vaso-vagal episode. The drop in blood pressure may cause transient cerebral hypoxia and give rise to a brief seizure.

Heart attack

Description

A heart attack occurs when one or more of

©A.L. Carter/Stock/Getty Images Plus

the coronary arteries become blocked.

Presentation

No two heart attacks are the same, and not everybody will present with all the signs and symptoms below:

- Pain in the chest/arm or arms/back/throat and lower jaw
- Breathlessness
- Feeling dizzy or sick
- Looking pale/grey/blue
- A sense of 'impending doom'.

The **Golden Rule of Andersen** is if you have a high index of suspicion that something is clearly wrong, then phone 999 or 112 and say so!

Treatment

- Phone 999 or 112
- Aspirin - 300 milligram dispersible tablet to be chewed, given crushed or swallowed with a small amount of water **unless contraindicated**
- Oxygen - 15 litres per minute with a non-rebreather mask and reservoir, but only if the person is cyanosed or has a reduced level of consciousness
- GTN spray.

Hypoglycaemia

Description

Hypoglycaemia is a blood glucose <3 millimoles per litre, although some patients may show symptoms at a higher blood sugar level.

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Table 1 Adrenaline dose

Age	Volume	Dose
Adult	0.50 ml	500 micrograms
Child more than 12 years	0.50 ml	500 micrograms
Child 6-12 years	0.30 ml	300 micrograms
Child less than 6 years	0.15 ml	150 micrograms

Table 2 Glucagon dose

Age	Volume	Dose
Adult	1 ampoule	1 milligram
Children >8 years old or >25kg	1 ampoule	1 milligram
Children <8 years old or <25kg	0.5 ampoule	500 micrograms

Table 3 Midazolam dose

Age	Dose
Adult	10 milligrams (mg)
Above 10 years	10 milligrams (mg)
Child 5 to 10 years	7.5 milligrams (mg)
Child 1 to 5 years	5 milligrams (mg)

Presentation

Other signs and symptoms include:

- Shaking/trembling
- Sweating
- Headache
- Difficulty in concentration/vagueness
- Slurring of speech
- Aggression and confusion/seizures

- Skin pale and clammy.

Treatment

- **Glucogel** can be given if the patient is co-operative and has an intact gag reflex. Twist off the cap and squeeze the gel into the mouth and swallow. Alternatively, GlucoGel can be squeezed inside the cheek

and the outside of the cheek then gently rubbed to aid absorption. Repeat after 10-15 minutes if necessary

- **Glucagon** is given when the patient is uncooperative/does not have an intact gag reflex/is unable to swallow safely/has an impaired level of consciousness. Administer IM into the upper arm or into the antero-lateral aspect of the thigh (**single dose only**) (Table 2). If any difficulty is experienced, or if the patient does not respond, then phone 999 or 112.

Seizure

Description

An epileptic seizure is the result of a sudden burst of excess electrical activity in the brain.

Presentation

Signs and symptoms of a **tonic-clonic** seizure are:

- The body stiffens (tonic stage)
- If standing, the person may fall (usually backwards)
- The muscles relax and contract rhythmically, causing the convulsion (clonic stage)
- Breathing may become laboured (ie difficult or noisy) and may stop for up to 40 seconds. The person may become cyanosed.

Treatment

- Time the seizure - note the time the seizure started and stopped
- Phone 999 or 112 if:
 - **The seizure has already lasted five minutes, and is continuing**
 - There is a slow recovery or you have any concerns
 - It is the person's first seizure
 - The person is injured.
- Oxygen - 15 litres per minute with a non-rebreather mask and reservoir (during an active convulsion)
- Buccal midazolam – for a tonic-clonic seizure that fits the criteria highlighted in **red** above. (Table 3.) Single dose only (even if the patient vomits) into the buccal sulcus.

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