



▶ Paediatrics

ISSUE 22

June 2010

▶ Spinal Injuries

▶ ECGs & Trauma

# Clinical *update*

## Have You Seen?

### Medical Director's Bulletin

Treatment of Taser  
Patients  
15/04/2010

Oxygen Alerts  
17/03/2010

Ambu Spur Bag & Mask  
18/02/2010

Clinical Equipment  
Update  
05/02/2010

Pan London Stroke  
Pathways  
26/02/2010

### Operations Bulletin

Blue calls: Changes in  
process and launch of  
major trauma networks  
01/04/2010

Past Issues of the Clinical  
Update can be found on *The  
Pulse* under News > Local  
newsletters > Clinical updates  
[http://thepulse/news/105793447  
0.html](http://thepulse/news/1057934470.html)

## Reminders

**Major Trauma** – Patients going to a major trauma centre as they have met the criteria on the trauma decision tree should have a blue call placed via channel PD09. The Clinical Coordination Desk will be able to provide advice around major trauma. If the patient meets the criteria on the decision tree for major trauma and is going to a major trauma centre, the relevant code should be used on the PRF (available on the updated PRF code card on the pulse under Patients > PRF Assignment Record and Clinical Record Form (LA4) <http://thepulse/patients/12726213312124.html>) even if the patient is within the normal catchment of the major trauma centre.

**Hyper Acute Stroke Unit and Cath Labs** – Patients being taken to a cardiac catheterisation lab or Hyper Acute Stroke Unit should have their blue call placed via the Clinical Coordination Desk on PD09.

**Left Bundle Branch Block** – Any patient who presents with 'classic' cardiac chest pain and has LBBB (wide QRS complex and no q wave in lead V6) on their 12-lead ECG may be taken direct to the nearest cardiac catheter lab for expert assessment. It must be stressed that the patient **must have** ongoing cardiac chest pain that you believe might be that of an acute MI. Patients who present with breathlessness or arm pain/silent MI and have LBBB **should not** go direct to the catheter lab.

**Care when in custody suites** – Staff are reminded to take extreme care when working in custody suites, taking particular care with objects that may potentially be able to be used as a weapon. Take great care to ensure that sharps are disposed of immediately post use. Objects such as scissors should be returned to equipment bags / holsters once used.

**Neonatal resuscitation masks for the bag and mask** – Staff are reminded that neonatal-size masks are available to order on ESeries and should be stored along with the paediatric bag and mask in the **oxygen bag** and not in the PALS kit to allow easy access.

## JRCALC National Clinical Guidelines correction of typographical error "Rectal Diazepam"

### Age per page guidelines

**In ages 6-11 years:** where it states '1 x 10ml tube' this should read '1 x 10mg tube'.

**In ages 12 months- 5 years** - where it states '1 x 5ml tube' this should read '1 x 5mg tube'.

### In ages birth - 9 months:

- where it states CONCENTRATION '2.5mg in 2.5ml' this should read '2.5mg in 1.25ml'
- where it states '1 x 2.5ml tube' this should read '1 x 2.5mg tube'.

### Drug guideline (A4)

#### Child <1 year:

- where it states CONCENTRATION '2.5mg in 2.5ml' this should read '2.5mg in 1.25ml'
- where it states '2.5ml (1 tube)' this should read '1 x 2.5mg tube'.

# Spotting the sick child

The Service attends around 50,000 under fives each year. Figure 1 shows the number of incidents that relate to children under five. Of note is that the Service attends far more children in the first years of their life than older children. Assessing paediatrics can be challenging, but sticking to a number of key principles will help.

There are a number of key anatomical and physiological differences between adults and children and understanding these differences is paramount when assessing children. Children have a relatively large tongue in comparison with adults which occupies much of the oropharynx. Some texts suggest this is why children are obligate nasal breathers. The paediatric trachea is both narrow and softer than the adult trachea as the C shaped cartilage rings have not matured. The more pliable trachea is at increased risk of compression and can occlude with hyper extension/flexion of the neck. In addition, due to the relatively narrow lumen only a small amount of swelling is needed to comprise the airway. In addition to this the epiglottis is comparatively larger than in adults and the larynx is higher and more anterior.

In children the bones are more flexible than in adults as they have yet to completely calcify. This means that in chest injuries significant underlying organ damage may occur without concurrent fractures. The ribs of a child also run more horizontal than in adults resulting in little leverage to increase the anterior and posterior diameter of the chest. This does not facilitate the degree of lift that is necessary to increase the volume of air within the chest when it is needed. The heart of a child occupies a proportionally larger area of the thoracic cavity leading to relatively smaller lungs which also decreases respiratory reserve of the child. In children the abdominal cavity is tightly packed

with organs restricting the level to which the diaphragm can descend, this again restricts how the respiratory system compensates for increased demand.

In the foetus the placenta provides oxygenation. There are various shunts within the circulatory system to allow for this. At birth the lungs expand and take over oxygenation and within the first days of life the ducts should close. Initially in the neonate the pulmonary resistance is high, as this drops the left ventricular pressure becomes dominant.

The total circulating blood volume per unit of body weight is greater than an adult by 25 per cent. The body surface area of the child is reported to be four times that of an adult yet heat production does not increase thus creating an increased risk of hypothermia. This is one of the reasons why the metabolic demand for children is proportionally higher than in adults. As a result, the increased metabolic demand and the fluid requirements of the child are increased.

The liver of an infant or a child has yet to develop fully and therefore has lower glycogen stores increasing the chances of hypoglycemia. The importance of capillary blood glucose testing in children should not be underestimated. Much of paediatric assessment follows a similar pattern to that of an adult and should take into account the child's age. The Paediatric Assessment Triangle (Figure 2) has been proposed as a useful aid when assessing children to gain a general overall impression, but does not negate a more detailed assessment. Each side of the triangle represents a key component of paediatric assessment, developed by the by the American Academy of Paediatrics it can provide a quick general impression of the child's condition.

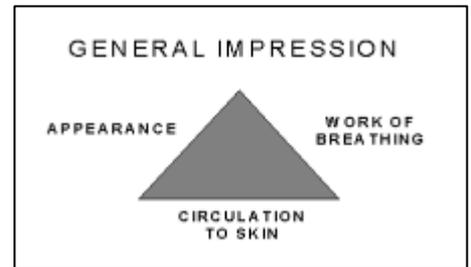


Figure 2

### Appearance

Assess the child from across the room to gain a general impression of the child. The TICLS (Figure 3) acronym provides a useful guide to what you should expect in a healthy child.

### Work of breathing

Assessing the work of breathing reflects the child's attempt to compensate for difficulties in oxygenation and ventilation.

Assessing respiratory effort should go beyond the rate and depth assessments of adults and must look at the effort of breathing (see figure 5). This should be a 'hands off' assessment and may require examination of the chest of the child at skin level to ensure this is not missed. This may mean asking the parent to briefly undress the child explaining why this needed.

### Circulation to skin

This reflects the adequacy of cardiac output. Inspect the skin (i.e. face, chest, abdomen) and mucous membranes (lips & mouth) for colour in central areas. In dark skinned children, the lips and mucous membranes are the best places to assess circulation.

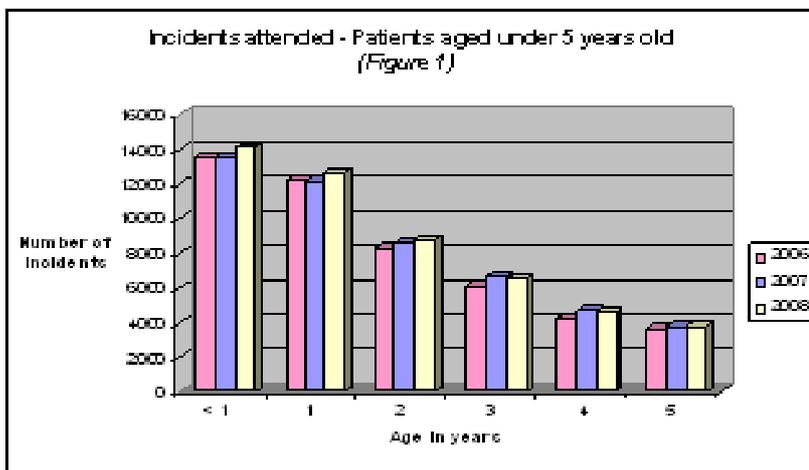


Figure 1

<b>T</b> one	Extremities should move spontaneously, with good muscle tone; should not be flaccid or move only to stimuli
<b>I</b> nteractiveness	Should respond to environmental stimuli or presence of a stranger; should not be listless, obtunded or lethargic
<b>C</b> onsolability	Easily comforted or calmed by caregiver
<b>L</b> ook/Gaze	Should maintain eye contact with objects or people; should not have a "nobody home" or glassy-eyed stare
<b>S</b> peech/Cry	Should be present, strong and spontaneous; should not be weak, muffled, or hoarse

Figure 3

Assessment of the airway should include listening to the noises made by the child on respiration and is helpful in determining any compromise of the airway. Nasal flaring and snorting is a frequent finding, with chest recession noted in airway compromise. Neonates, who are obligate nasal breathers, often experience serious respiratory distress with nasal obstruction. Older children with nasal obstruction characteristically breathe with their mouths open. Feeding is often difficult or impossible, and patients may be unable to handle their own saliva and may drool. Children can have slightly irregular respiratory patterns, so counting the respiratory rate over 30 seconds will provide a more accurate respiratory rate than counting over 10 or 15 seconds. As well as assessing the work of breathing, auscultating the chest will provide vital information around the patient's respiratory condition. When auscultating the chest of a small child listening in the mid axillary line will reduce transmitted sounds from the opposite lung. Assessment should consider the effort of breathing including looking for intercostal recession (figure 4), nasal flaring, and in the older child the tripod position all of which indicate effort of breathing.



Figure 4

Pulse oximetry can be an important measure when assessing the unwell child and provides a useful adjunct to clinical assessment. Remember that most children without underlying health problems will have very good saturations and even what may be considered normal in an adult, for example a reading of 95 per cent would be notably low for a healthy child. A child who appears unwell despite a normal saturation reading may still be significantly unwell.

As with all vital signs normal pulse rates in a child will vary with age (see table 1) although the actual pulse points are the same as in adult. In small children the brachial pulse may be easier to find. If finding a pulse is still difficult, listen with a stethoscope to determine heart rate. In children the most common reason for bradycardia is hypoxia and simple methods of opening the airway and basic airway adjuncts to improve oxygenation can correct bradycardia.

As well as assessing the pulse, a capillary refill test should be carried out. Remember if the child has cold limbs the capillary refill should be done using a central location such as the sternum. Although blood pressures can be difficult to obtain in children they can be a useful determinant of shock. A normal blood pressure can be misleading as children can compensate well. Also look for reduced skin turgor which can indicate dehydration.

**Work of breathing features to look for:**

Abnormal airway sounds	Snoring muffled or hoarse speech, stridor, grunting, wheezing
Abnormal positioning	Sniffing position, tripodding, refusing to lie down
Recession	Supraclavicular, intercostal, (Figure 4) or substernal recession of the chest wall; head bobbing in infants
Flaring	Nasal flaring

Taken from PEEP 2002

Figure 5

**Respiratory noises**

Wheezing	Indicates lower airway narrowing and is most commonly heard on expiration.
Stridor	Can indicate an imminent danger to the airway due to reduction in airway circumference to approx 10 per cent of normal.  The volume of stridor or wheeze is not an indicator of severity and indeed may diminish because less air is being moved.
Grunting	Is produced by exhalation against a partially closed glottis. This is a sign of severe respiratory distress and characteristically seen in infants.

Taken from JRCALC National Clinical Guidelines 2006

When assessing circulation also consider dehydration. When did the child last eat and drink? Has the child been to the toilet to urinate or have the child's nappies been wet?

Assessment of disability should consider the general appearance of the child looking both at the level of consciousness, with either the AVPU scale or the paediatric modified Glasgow Coma Score, and assessing the tone of the child. A floppy /atonic child is a serious concern. Pupils should be checked along with consideration of any photophobia. The very gentle palpation of the fontanelles may reveal bulging fontanelles, a sign of increased intracranial pressure. Sunken fontanelles may indicate dehydration. The fontanelles close at around two years of age.

A proper exposure of the child allows for careful examination of the skin looking carefully for rashes and injuries. Care needs to be taken to avoid heat loss. A non blanching rash is indicative of meningococcal septicaemia (see figure 5). Remember that a child can be seriously ill with meningitis without a rash or with a blanching rash.

**Circulation to skin**

Characteristic	Features to look for
Pallor	White or pale skin/mucus membrane colouration
Mottling	Patchy skin discolorations due to vasoconstriction
Cyanosis	Bluish discoloration of skin and mucus membranes

Taken from PEEP 2002

Age	Respiratory Rate	Pulse Rate
<1 year	30-40 breaths per minute	110 -160 beats per minute
1-2 years	25-35 breaths per minutes	110 -150 beats per minute
2-5 years	25-30 breaths per minute	95 -140 beats per minute
5-11 years	20-25 breaths per minutes	80 -120 beats per minute

Table 1

**Other components of paediatric assessment****Medical history:**

Consider any medical history including whether the child was born prematurely.

**Contact with other unwell individuals:**

Has the child been in contact with any one else who has been unwell?

**Medication/allergies:**

Has the child been taking any medication or does the child have any allergies to medication?

**Toxicological:**

Has the child had access or exposure to any potential harmful substances?

**Development:**

Has the child reached the expected developmental milestones?

**Immunisation:**

Is the child up to date with immunisations?

**Social/environmental:**

Are there any social or environmental factors to note?

**Safeguarding:**

Are there any safeguarding concerns? The NICE guidelines <http://guidance.nice.org.uk/CG89> provide a useful guide to spotting safeguarding concerns.

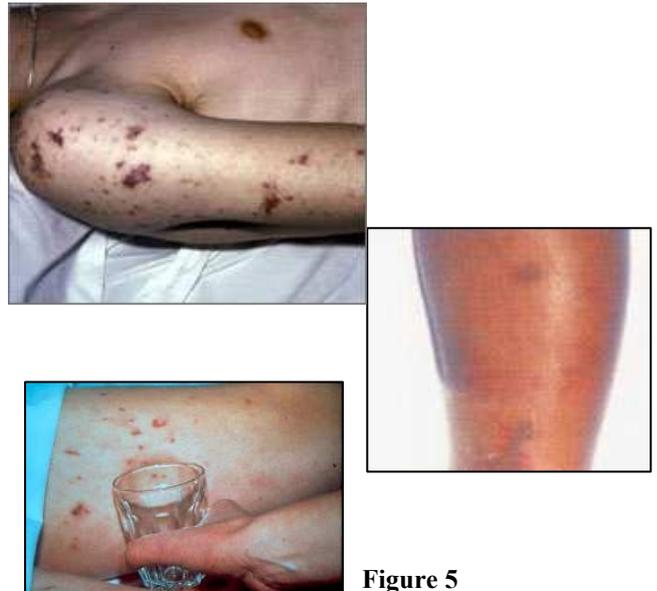


Figure 5

# Benzylpenicillin use in the Service

**Background**

The Clinical Audit and Research Unit (CARU) have recently carried out a clinical audit into the use of benzylpenicillin in the Service.

Benzylpenicillin was introduced into the Service for the treatment of suspected meningococcal septicaemia, an infectious disease that affects people of all ages but is most prevalent in children under five years of age. Meningococcal septicaemia is a rare but dangerous disease, with a mortality rate of approximately 10 per cent. It can cause rapid deterioration in the patient's condition, so early recognition and appropriate pre-hospital treatment is crucial. Meningococcal septicaemia is indicated by the presence of a non-blanching rash and other signs/symptoms including: increased respiratory rate, heart rate and temperature, photophobia, mottled skin, delayed capillary refill, joint pain and lowered oxygen saturation.

The audit assessed if benzylpenicillin use was indicated in the patients that received it, as well as assessing if the drug was given as per JRCALC Clinical Practice Guidelines and whether patients were conveyed to hospital with a blue alert.

**What the clinical audit found:**

- A non-blanching rash was documented in 57 per cent of cases. However, on examination of all the documented signs and symptoms on the PRF, benzylpenicillin administration was found to be indicated for all but one patient in the audit.
- 92 per cent of patients received the correct drug dose for their age.
- Only 35 per cent of PRFs documented the drug/water mix used for reconstitution of the drug.
- 75 per cent of patients were transferred to hospital with a blue alert, and where this happened patients arrived at hospital on average four minutes earlier than for those where a blue alert was not placed.

**Conclusions and recommendations:**

Although benzylpenicillin is generally being administered in the correct dose, crews should be reminded of the drug reconstitution protocols (600 milligrams dissolved in 9.6ml water for injections for IV injections or 600 milligrams dissolved in 1.6ml water for injections for IM injections) and the importance of accurately documenting all details of drug administration (time of administration, dose, route and volume of water for reconstitution).

- Crews are reminded that all patients with suspected meningococcal septicaemia should be rapidly transported to hospital with a blue alert, and if possible all treatments other than correcting airway and breathing problems should be carried out in transit.
- Where a patient has suspected meningococcal septicaemia but no non-blanching rash, crews should discuss the case with the Clinical Support Desk but not delaying on scene.

For further information, or a copy of the report, please contact CARU on 020 7783 2504 (or see the X:\Clinical Audit & Research Unit\Clinical Audit Reports).

# Spinal injuries in older patients

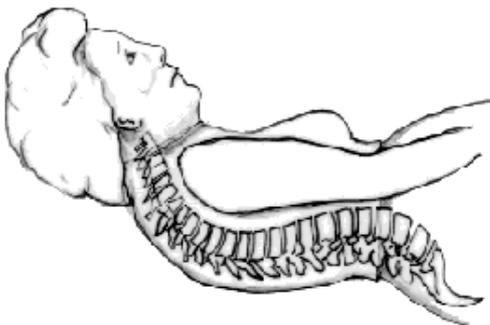


Falls are a common problem in older people and are a common reason for 999 calls. Often, there are no significant injuries, and the patient can be left at home after a thorough assessment.

Degeneration of the vertebral column is common; at the same time, there is often a reduction in flexibility. This means that fractures are fairly common after relatively low mechanism injuries.

When assessing the older patient who has fallen, it is essential to establish whether or not they have neck pain. It is often not possible (and probably inappropriate) to try and distinguish between 'old' and 'new' pain. If there is any doubt, and especially if there is any weakness, numbness or other neurological signs, the patient should be immobilised and transported to hospital for formal assessment. It is important to consider possible medical causes of the fall, such as an arrhythmia, STEMI, stroke or black-out, although finding one of these does not eliminate injury!

Have a very low threshold for immobilisation in the patient who either says that things 'just don't feel right', has vague signs and symptoms, or who is unable to give a clear mechanism, and may be impaired through dementia.



Immobilising the patient with a fixed curvature of the spine may present a significant challenge to ambulance crews. It may not always be possible to get a cervical collar to fit correctly, and lying the patient down on the scoop stretcher may reveal a gap behind the head and neck.

Do not forcibly restore the head to a neutral position.

In cases such as this, you may need to be fairly creative in how you immobilise and support the head and neck. Consider using blankets or other padding to provide the most comfortable support that you can. A Vacuum splint can often be moulded to fill the gap and provide comfortable support.

It is important to remember that older patients, especially if they have a degree of dementia may become very distressed when immobilised in a supine position. It may be appropriate to

loosen straps and tape, at the same time as doing your best to reassure the patient. It is also essential to minimise the time that the patient spends on any form of rigid stretcher. Aim for a smooth journey to hospital and a rapid transfer onto a hospital bed.

As well as documenting your findings on the PRF, be sure to document how you have immobilised the patient, especially if it has proved to be difficult and how you have extricated them from the house. Finally, consider the environmental circumstances of the fall – Is the environment safe, or is another fall highly likely? If in doubt, complete a vulnerable adult referral form, and / or consider a local falls referral.

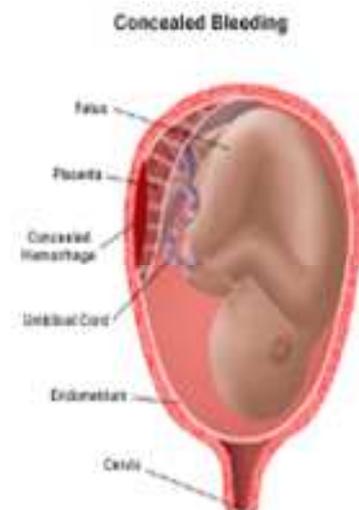
## Neck injuries in intoxicated patients

Remember that it is not possible to clear the cervical spine of an intoxicated patient. Their recollection of events, answers to direct questioning and response to physical examination may well be unreliable.

In the presence of a significant mechanism of injury, the head and neck should be immobilised.

# Placental abruption

In placental abruption the placenta prematurely separates from the uterine wall and the foetus is starved of oxygen and blood is lost from the maternal circulation. The placental separation may be partial or total. Separation can occur during the antenatal period, during labour and birth. The placenta may spontaneously separate with no known cause, following trauma or a rise in blood pressure. The women often reports increasing abdominal pain and may report pain elsewhere. If the woman is contracting but pain persists this should alert crews. Maternal observations may remain normal for a time but the pulse rate will increase with a decrease in blood pressure before maternal collapse. Mother / infant mortality and morbidity is high and rapid blue light transfer is required to the nearest maternity unit. Foetal wellbeing is assessed in hospital and is an important priority. If a midwife has been requested but abruption is suspected, do not await attendance or delay life saving transfer.



# Headaches

Headaches are a common medical presentation and are often benign. Although occasional they can indicate a serious underlying pathology. This article provides some bullet points around examination and history taking in patients who present with a headache as well as some common red flags.

## Neurological examination

- Mental state
- Cranial nerves
- Motor
- Sensation
- Reflexes
- Cerebella
- Plantars

AVPU  
GCS  
FAST

## History

- Onset
- Site
- Weakness, clumsiness, or loss of balance
- Medication

- Any head injury?
- Don't be distracted by alcohol
- Change in usual headaches?

## Red flags

Thunderclap

Most severe headache

Neck pain/stiffness

Impaired consciousness

Visual disturbance

Unilateral weakness

Vomiting

## Headache emergencies

- subarachnoid haemorrhage
- meningitis
- headache of raised intracranial pressure

## Less urgent causes

- migraine
- tension

Pressing or tight nature last 30 minutes to seven days mild to moderate intensity/normal/neurology/stress/

- unchanged by activity
- no photophobia
- no nausea or vomiting
- no neurological signs

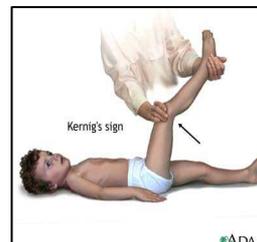
It can be hard to distinguish a first attack or a bad episode from subarachnoid haemorrhage.

- headache slower onset
- aura warning eg visual most common flashing lights, facial numbness, strange noises
- vomiting, weakness, numbness, paraesthesiae
- no neck stiffness / or rash

- sudden onset
- maximum intensity immediately/minute
- worst headache ever
- like being hit on the back of the head with a hammer
- small warning headaches days before large bleed
- associations
  - nausea and vomiting
  - loss of consciousness
  - photophobia (intolerance of light)
- signs of meningeal irritation
  - neck stiffness
  - positive Kernig's sign

Raised BP & slow pulse = Raised intracranial pressure

Temperature = Infection (meningitis, encephalitis, septicaemia, brain abscess)



One of the physically demonstrable symptoms of irritation of the meninges is Kernig's sign. Severe stiffness of the hamstrings causes an inability to straighten the leg when the hip is flexed to 90 degrees.

# Anthrax in IV drug users

There have been a number of cases of anthrax infections in IV drug users (IVDU) initially reported in Scotland but now a number of cases have been reported in London. Staff should be aware of the possibility of anthrax infection in IVDUs presenting with severe soft tissue infections or sepsis. Please notify any cases of severe soft tissue infection or sepsis in an IVDU, who died or have been sufficiently unwell to require admission to the Clinical Support Desk who will arrange reporting, to Health Protection Unit.

The soft tissue infection of anthrax may reveal itself to ambulance staff as a relatively painless boil-like lesion. After a few days this lesion may present with a black centre (see picture below). It can also often look like 'mould on a piece of bread'. Cutaneous anthrax is rarely fatal if treated, but without treatment cases can progress to toxic shock and death.



## Q1. What is anthrax?

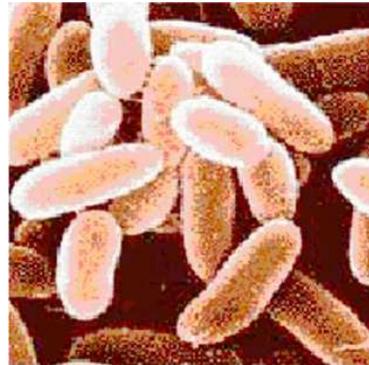
Anthrax is a very rare but serious bacterial infection caused by the organism *Bacillus anthracis*. The disease occurs most often in wild and domestic animals in Asia, Africa and parts of Europe; humans are rarely infected. The organism can exist as spores that allow survival in the environment, eg in soil, for many years.

## Q2. How does anthrax usually affect humans?

There are three classical forms of human disease depending on how infection is acquired: cutaneous (skin), inhalation and ingestion. In over 95 per cent of cases the infection is cutaneous, generally caught by direct contact with the skin or tissues of infected animals. Inhalation anthrax is rare and is caught by breathing in anthrax spores. Intestinal anthrax is very rare, and occurs from ingestion of contaminated meat or spores.

## Q3. How has anthrax been infecting drug users?

There is an ongoing outbreak of anthrax in heroin users in Scotland and this may be related to cases in London. Since December 2009, a significant number of Scottish heroin users have been found to have anthrax infection. A number of these people have died. It is thought that they contracted anthrax after taking heroin contaminated by anthrax spores and this has caused inoculational anthrax which causes severe disease and is different to classical cutaneous anthrax.



## Q4. How long can you have the infection before developing symptoms?

This is dependent on the dose and route of exposure and may vary from one day to eight weeks. However, symptoms usually develop within 48 hours with inhalation anthrax and one to seven days with cutaneous anthrax. It is not known exactly how long symptoms take to develop following the use of contaminated heroin, however in most cases during the current outbreak, symptoms started within one to seven days of taking heroin.

## Q6. What are the symptoms?

Early identification of anthrax can be difficult as the initial symptoms are similar to other illnesses.

Symptoms vary according to the route of infection:

Cutaneous anthrax - local skin involvement after direct contact. Commonly seen on hands, forearms, head and neck. The lesion is usually single. One to seven days after exposure a raised, itchy, inflamed pimple appears followed by a papule that turns vesicular (into a blister). Extensive oedema or swelling accompanies the lesion – the swelling tends to be much greater than would normally be expected for the size of the lesion and this is usually PAINLESS

The blister then ulcerates and then two to six days later the classical black eschar develops. If left untreated the infection can spread to cause blood poisoning.

Symptoms of inhalational anthrax

Inhalational anthrax - symptoms begin with a flu-like illness (fever, headache, muscle aches and non-productive cough) followed by severe respiratory difficulties and shock two to six days later. Untreated disease is usually fatal, and treatment must be given as soon as possible to reduce mortality.

## Q7. What is the risk to staff?

A person can get anthrax if they inject, inhale, ingest or come into direct physical contact (touching) with the spores from the bacteria. These spores can be found in the soil or in contaminated drugs but may also be released from specimens from an infected person cultured in the laboratory. Blood and body fluids from an infected patient do not pose any risk of inhalational anthrax, but may pose a hypothetical infection risk of cutaneous anthrax especially through a needlestick injury or scratch or break in the skin. The infection risk can be greatly reduced by standard effective infection control practices.

It is extremely rare for anthrax to spread from person-to-person and the risk to staff from an infected patient is minimal. Airborne transmission from one person to another does not occur. There have been one or two reports of spread from skin anthrax but this is very, very rare.

## Q8. Can anthrax be treated?

Cutaneous anthrax can be readily treated and cured with antibiotics. Mortality is often high with inhalation and gastrointestinal anthrax, since successful treatment depends on early recognition of the disease.

# Answer from last edition's major trauma scenarios

## Scenario 1

- 25-year-old
- Motorcyclist vs car 40 mph bull's-eye to the windscreen
- Airway Patent, Breathing Resp 24 Spo2 100% (100% O<sub>2</sub>), Circulation Pulse: 110 B/P: 140/100
- GCS 10 (Eyes 3, Verbal 2, Motor 5)
- Has obvious fractured lower limb
- St Somewhere Trauma Unit 10 minutes
- St Elsewhere Major Trauma Centre 20 minutes

## Scenario 2

- 45-year-old
- Tripped over kerb and hit head on pavement
- Airway Patent, Breathing Resp 20 Spo2 98% (air), Circulation Pulse: 98 B/P: 168/98
- GCS 10 (Eyes 3, Verbal 4, Motor 6)
- Has deep laceration across forehead
- St Somewhere Trauma Unit 8 minutes
- St Elsewhere Major Trauma Centre 14 minutes

## Scenario 1 Questions & Answers

- Should I use the trauma decision tree?
  - Yes the trauma decision tree should be used in the context of major trauma
- Trauma centre or major trauma centre?
  - Major trauma centre
- If appropriate which part of the decision tree does the patient flag on?
  - Reduced GCS less than 14
- Do I need to contact the Clinical Coordination Desk?
  - Yes, the Blue call should be placed on PD09
- The patient is in North West London - where should they go until October 2010?
  - The nearest open major trauma centre
- Where can I get help or additional advice from?
  - Clinical Coordination Desk

## Scenario 2 Questions & Answers

- Should I use the trauma decision tree?
  - No, the trauma decision tree should be used in the context of major trauma only.
- Trauma unit or major trauma centre?
  - Trauma unit
- If appropriate, which part of the decision tree does the patient flag on?
  - The trauma tree should not be used for this incident as the trauma decision tree should only be used in the context of major trauma
- Do I need to contact the Clinical Coordination Desk?
  - Only if additional help or advice is required

# ECG of the Month

This ECG belongs to an 86-year-old female who had a history of hypertension. She woke from sleep with shortness of breath and had a blood pressure of 178/100 and oxygen saturations on air of 92%  
 What does this ECG show?  
 Where should this patient be conveyed?

