Musculoskeletal infection in children

Parent information

Musculoskeletal infection is usually caused by bacteria. There are two main types:

- **Osteomyelitis** is the medical term for a bone infection.
- **Septic arthritis** is infection of a joint.

It is possible to have osteomyelitis and septic arthritis together.

**Why does musculoskeletal infection happen?**

Osteomyelitis develops when the bone becomes infected. In most cases, bacteria is responsible for the infection, although it can also be caused by fungi. Usually the bacteria travels via the blood stream and settles in the bone or joint. Some people believe there may have been a minor recent injury that makes the bone or joint more vulnerable at the time of infection.

**Blood tests**

Blood tests are required to establish the diagnosis and ongoing treatment. Blood tests alone cannot confirm osteomyelitis, but can indicate whether there is a high number of white blood cells in your blood, which may suggest if there is an infection. At the beginning of infection, it can be possible to do blood tests that can determine the type of bacteria. This can help target antibiotics.

**Imaging tests**

If osteomyelitis or septic arthritis is suspected, it is likely you will be referred for further imaging testing. There are several imaging tests that may be able to detect bone damage caused by osteomyelitis. They include:

- **X-rays**, where low levels of radiation are used to create an image of the affected bone - this test is not usually useful for diagnosis if the condition is in the early stages.
- **Magnetic Resonance Imaging (MRI) scan**, where a strong magnetic field and radio waves are used to build up a picture of the inside of the affected bone. Depending on the age of your child, sedation or general anaesthetic may be required to perform this test.

**How are osteomyelitis and septic arthritis treated?**

Osteomyelitis is usually treated with antibiotics, used for at least four to six weeks. In rare cases it is necessary to clear the bone infection with an operation.

Septic arthritis usually requires surgery to wash the infection out of the joint.

The main treatment for both infections is antibiotic medication.
The medication needs to be given intravenously (directly into a vein), this means that your child will require a long term IV line. This is mainly inserted under a general anaesthetic, but if your child is old enough to lie still, can be inserted with gas and air (nitrous oxide).

If your child is well enough, they may be able to receive the injections as an outpatient, or by your local children’s community nurses. Your child’s discharging nurse will guide you through their requirements.

**Who will be caring for my child?**

During the treatment they will be looked after by several members of the hospital team. These include:

**Paediatricians**: doctors responsible for managing the infection and antibiotic treatment. They will see your child regularly and advise on the need for blood tests and any antibiotic prescription changes.

**Paediatric orthopaedic surgeons**: Who will be responsible for the long term condition of the bone affected and any surgery for infection wash outs if required. In some cases the paediatric orthopaedic surgeon will need to monitor the growth of the bone long term.

**Paediatric anaesthetists**: doctors specialising in giving children general anaesthetic. You may meet them if your child requires a general anaesthetic for an MRI scan or intravenous line insertion.

**Nurse specialists**: they will be your link between home and the hospital.

**Community nursing teams**: they will be able to administer your child’s intravenous antibiotics at home.

**What should I look out for at home?**

- a high temperature (fever) of 38C (100.4F) or above
- intense bone pain
- swelling, redness and a warm sensation in the affected area

Very young children do not always develop a fever when they have osteomyelitis and they may not be able to communicate any bone pain. You should contact the hospital if your child becomes irritable has a reduced appetite and is reluctant to use a certain part of their body (most often an arm or leg).

**Contact numbers:**

**Ward F3/D2/C3**: __________________________________________________

**Nurse specialist**: __________________________________________________

**Community team**: _________________________________________________

**My child’s next appointment is**: ______________________________________

**My child’s next blood test is due**: _____________________________________
We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site.
For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

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Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

Document history
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Contact number        01223 254988
Publish/Review date   September 2015/September 2018
File name             Musculoskeletal_infection_in_children.doc
Version number/Ref    1/PIN3772