Pulled Elbow or "Nursemaids Elbow" is common in young children between 1 and 4 years of age. It is rare beyond the age of 6 years. It is due to the annular ligament of the radial head becoming stretched and entrapped.

There is usually a history of a pull on the affected arm, such as when a child tries to run off in a different direction when walking with the hand held by a parent. Sometimes the incident is unobserved or thought to be too trivial to have caused any injury.

The child typically allows the arm to hang loosely by their side in a pronated position. They are usually not distressed unless the arm is moved, passive elbow flexion is usually allowed but supination causes pain.

If there is any deformity at the elbow an alternative diagnosis (e.g. fracture or osteomyelitis) is more likely. Obtain further investigations prior to any attempts at reduction.

**Investigation**

X rays are unnecessary if there is a typical history and no visible swelling or deformity. If the child has a pulled elbow the X ray is normal. If an X-ray has been requested the child may have normal use of the arm on return from radiology as positioning by the radiographer may result in reduction.

**Management**

There are 2 methods of reduction – ‘hyperpronation’ or ‘supination then flexion’. The ‘hyperpronation’ method has been shown to be more successful and possibly less painful.

We recommend using the ‘hyperpronation’ method (which can be followed immediately by ‘supination then flexion’ method if desired). If the first attempt is unsuccessful, repeat the manoeuvre after 15 minutes. Reduction is usually simple although briefly distressing for the child – warn the parents beforehand.
Hyperpronation Method

Support the child’s elbow flexed at 90 degrees with one hand, with gentle pressure from your thumb over the radial head and immobilising the humerus. Hold the child’s hand with your other hand as if shaking hands. Turn the palm down (pronation) and straighten the elbow while maximally pronating the forearm. You may feel a click over the radial head.

Supination & Flexion Method

Support the elbow flexed at 90 degrees with one hands, with gentle pressure from your thumb over the radial head. Hold the child’s hand in your other hand as if you are shaking hands. Fully supinate then fully flex the elbow. A click is usually felt over the radial head either when the elbow is fully supinated or fully flexed. Failure may be due to not putting the elbow through the complete range of motion.
Discharge Planning

Most children will use the arm normally within 5-10 minutes of the reduction. In this case the child may be discharged with no follow up required. A good test for successful reduction is whether the child will actively reach for a toy at arms reach.

If the reduction has been delayed for 12 hours or longer the child may not use the arm normally for a longer period of time.

Occasionally it is unclear whether reduction has been successful. In these cases consider other possibilities (e.g. supracondylar fracture or osteomyelitis). A sling ± backslab can be used for comfort, with review of whether the child will use the arm 24 hours later. If the child is still not using the arm normally at this stage obtain X-rays (if not already performed) and consult the orthopaedic team.

Provide caregivers with the “Pulled Elbow” advice sheet from CED (below).

References


Charles G. Macias, MD†, Joan Bothner, MD‡, Robert Wiebe, MD. A Comparison of Supination/Flexion to Hyperpronation in the Reduction of Radial Head Subluxations. Pediatrics Vol. 102 No. 1 July 1, 1998, pp. e10

Pulled Elbow

What is a Pulled Elbow?
A pulled elbow is a common mild injury in children. A pulled elbow is usually caused by a sudden “yank” or “pull” on a child’s lower arm or wrist. It can happen when a child is lifted up by one arm. When this occurs the child will often cry straight away and not use the injured arm. The injured arm can be left hanging by the child’s side.

Why does a Pulled Elbow occur?
Children have weaker ligaments which can be stretched when pulled. This mild injury occurs when the arm is suddenly pulled and one of the ligaments in the elbow stretches a little bit and slips over a bone called the radial head. When this ligament is out of position children have pain in their arm, particularly on turning their wrist.

Care for a Pulled Elbow
The injury will be treated by a doctor or nurse who will move the elbow and arm to manipulate the ligament back into its correct place. An X-Ray is not usually needed to find out what is wrong. The ligament can easily be slipped back into its correct place. It can be distressing for your child for their arm to be moved in this way, but it takes a very short time to do this manoeuvre. Your child will be observed for a short time to check they use their arm without any pain or problems. If the pulled elbow does not get put back in place or your child does not use their arm, they will have an X-Ray of their arm and further assessment.

How you can help your child.
Your child will play normally when the ligament has been put back into its right place. Usually the arm is not still painful but paracetamol can help if they have some pain. Remember this mild injury occurs because children have weaker ligaments. You can help prevent the pulled elbow injury by doing the following:
  - Try not to pick your child up by one arm or the wrist.
  - Teach others (grandparents and caregivers) to do the same.
Your child should be able to attend crèche, kindergarten or Kohanga Reo as usual.

Please come back if:
  - Your child does not use their arm
  - Your child is in pain and the pain is not stopped by giving paracetamol

If the injury does occur again do not try to put back the bone or straighten your child’s arm yourself. Please go to your Family Doctor GP or come back to Children’s Emergency Department (CED).

Any queries you have - please phone CED on 307-4902
Or contact your Family Doctor (GP).