

LRI Children's Emergency Department

Clinical guideline for:

Management of 'pulled elbow' from triage

Staff relevant to:	CED medical and nursing staff
Re-approved by:	Children's ED guidelines committee
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Mechanism of injury

Child's outstretched arm is pulled
OR

The child pulls away while their hand is being held

Presentation

- Children appear to be happy and playing, but hold their affected arm in pronation and slight flexion
- Arm held limply at their sides
- Favour their other hand in play
- Usually aged 1 – 3 years

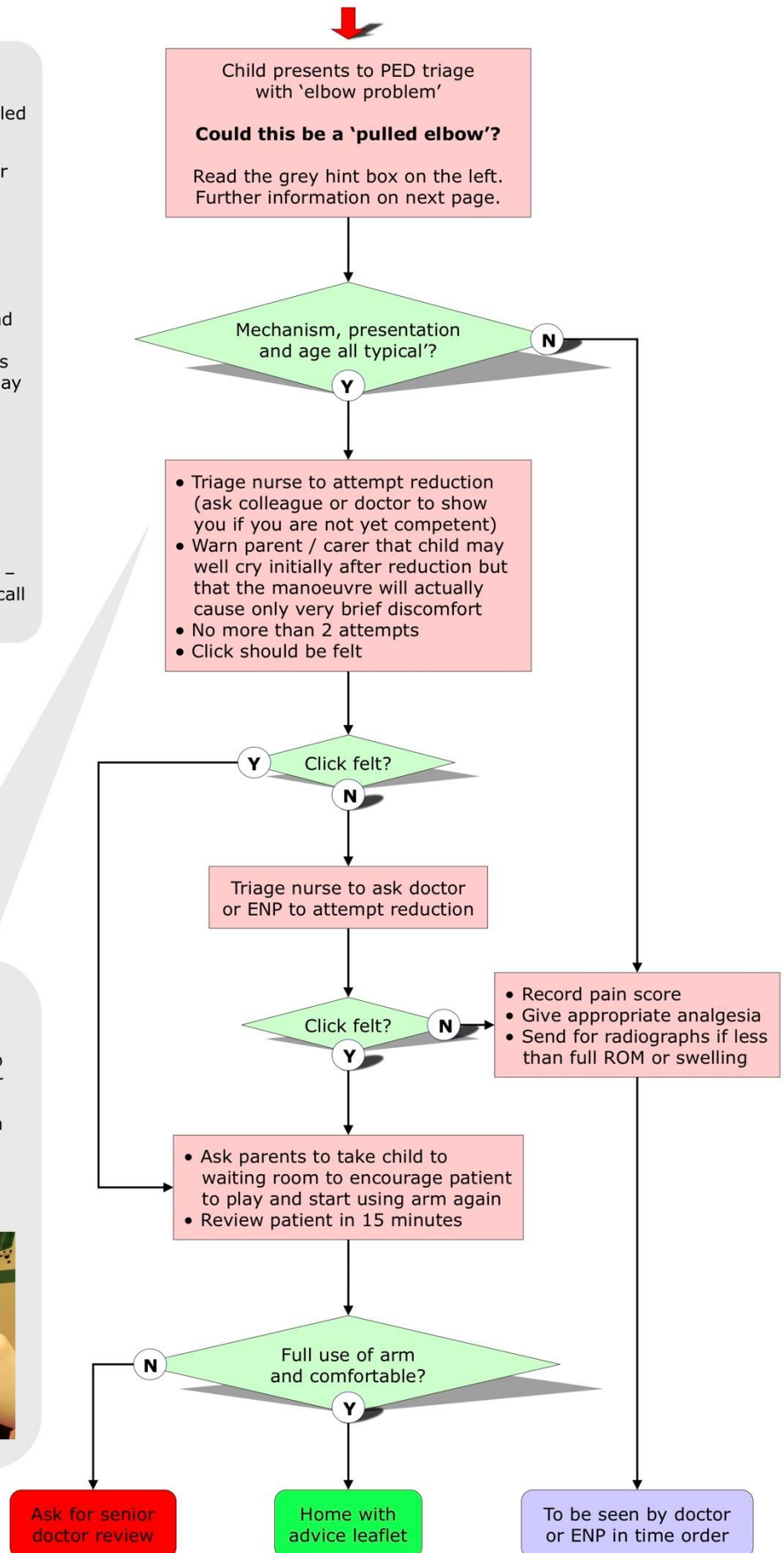
Comment

The correct medical term for 'pulled elbow' is 'radial head subluxation' (RHS).

It is **NOT** an elbow dislocation – please correct parents if they call it that.

Reduction technique

- Fix elbow with one hand
- With the other, gently grasp the hand and turn it further (so that thumb is pointing downwards) until you feel a click
- If no click is felt, turn the hand the other way while flexing the elbow until click



Radial head subluxation – further information

History

Before undertaking a physical examination, a thorough patient history including mechanism of injury should be taken. This is of paramount importance if injuries other than pulled elbow, such as fractures and non-accidental injuries, are to be excluded.

Usually, the child is aged 1 – 3 years and will be brought in with a history of the arm having been pulled – either deliberately (e.g. during swinging games) or accidentally (they were grabbed to stop them running, or they dropped themselves to the ground for fun or in a tantrum). A pulled elbow can actually occur very easily without excessive force.

Sometimes, parents or carers simply report that children were found crying and unable to move their arm. It should be noted that parents and carers often feel responsible for the children's injuries. [1] So bear in mind that it can take a while for the right story to emerge, and that this may require a direct question.

Pain

Young children may find it difficult to verbalise their pain score, which can complicate the assessment process. Therefore it is important that other indicators are taken into consideration, such as facial expressions, behaviour and guarding of limbs.

The injury explained

In 'pulled elbow', the annular ligament around the radial head is dislodged when the arm is pulled (middle), partially dislocating into the radiocapitellar joint when the arm is released (right).



Reduction

The 'forced pronation' technique has been shown to be the most successful and painless technique. [2,3] This can be followed immediately by the classic flexion/ supination maneuver if necessary.

References

1. Davies F, Bruce CE and Robinson-Taylor K. 3rd edition, 2017. Emergency Care of Minor Trauma in Children, Taylor & Francis, London, ISBN-13: 978 1 4987 8771 0 1.
2. Macias CG, Bothner J and Wiebe R. A Comparison of supination / flexion to hyperpronation in the reduction of radial head subluxations. Paediatrics 1998;102:e10.
3. Green DA, Linares MY, Garcia Pena BM et al. Randomized comparison of pain perception during radial head subluxation reduction using supination-flexion or forced pronation. PedEmergCare 2006;22:235-8.