How to Reduce a Nursemaid's Elbow

Solo recording:

A nursemaid's elbow, also called radial head subluxation, is a common pediatric elbow injury. It generally occurs when a young child's arm is pulled on either as they catch themselves from a fall or when being lifted by the arm. The patient will usually present with a report of not using the affected arm, and with the arm held close to the body and slightly flexed and pronated. The actual pathology is that the radial head has slipped from its normal position under the annular ligament. This is a clinical diagnosis and does not require radiologic confirmation. Nursemaids elbow is not usually associated with bony tenderness, swelling, or deformity, and if those are present, there may be a different diagnosis.

Two methods for reduction of nursemaid's elbow are typically taught. The hyperpronation method has evidence showing a higher rate of first attempt success. To perform this method, with one hand support the arm at the elbow and place pressure on the radial head with a finger. With the other hand grip the distal forearm and pronate the forearm fully. A click or pop may be felt by the supporting hand.

The second method is the supination flexion method. Use one hand to support the elbow and place pressure on the radial head with a finger. With the other hand apply gentle traction to the arm, then fully supinate the arm, then fully flex the arm. Just as in the first method a click or pop may be felt.

After a successful reduction the child is usually moving the arm fully and without pain within a few minutes. If this does not happen, another attempt at reduction can be made though I recommend searching for signs of fracture and potentially obtaining appropriate radiographs if warranted.

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Interview Style (Discussion points and notes for the interviewee)

1. **What is a nursemaid's elbow? Does it have another name?**
    - **a.** Nursemaids elbow also called radial head subluxation. It is common in young children.

2. **How does the injury occur?**
    - **a.** Typically from a pulling mechanism, such as being lifted by the arm or catching themselves during a fall

3. **What is the typical presentation/physical exam?**
    - **a.** Usually the arm is not being used and is held close to the body slightly flexed and pronated.

4. **What sort of methods are taught for reduction? Is one better than the other?**
    a. Two methods, hyperpronation has evidence of higher first attempt success
        i. Hyperpronation
            1. Support the arm and press on the radial head with one hand
            2. With the other hand grip the distal foream and pronate it as far as it will go
        ii. Supination/Flexion
            1. Support the arm and press on the radial head with one hand
            2. With the other hand grip the distal forearm, apply traction, fully supinate, then fully flex

5. **Determining success**
    a. Most children will fully use the arm within a few minutes if successful
    b. If not using the arm, re-examine for signs of fracture/determine need for XR
    c. May attempt reduction again