

## DISTAL HUMERUS EPIPHYSEAL SEPARATION IN NEWBORN: A CASE REPORT

Mohd Radzi Khairudin<sup>1</sup>, Bardrul Aznil Ismail<sup>1</sup>, Muhammad Farhan Yahaya<sup>1</sup>, Sopian Shuib<sup>1</sup>, Anizar Faizi Anoar<sup>1</sup>, Muhammad Sallehuddin Hassan<sup>1</sup>

<sup>1</sup>Hospital Sultanah Bahiyah

**Introduction:** Distal humerus epiphyseal separation (DHES) occurs due to birth related injury, non-accidental injury or trauma. It is rare but typically seen in children less than 3 years old. We report our experience of managing a newborn presented with right DHES.

**Discussion:** A 2.7kg term baby delivered via ventous-assisted delivery due to prolonged 2nd stage of labor was referred at 8 hours of life due to incomplete Moro's reflex on the right upper limb. The right elbow swollen and deformed with bruises at medial part. Baby was irritable upon handling with limited elbow movement. Right elbow radiographs revealed posteromedial displacement of radius and ulna. Intraoperatively, arthrogram done to confirmed diagnosis and guide reduction. 2 lateral divergent K-wires inserted to maintain anatomical reduction. Above elbow cast applied. 3 weeks postoperatively, abundant callus seen and removal of k wire and cast done. Gentle ROM exercise commenced. At week 7, full passive ROM and no obvious deformity was seen. 56% of DHES was misdiagnosed on initial assessment. This is due to difficulty in diagnosing based on plain radiograph. High index of suspicion correlating with clinical examination will ensure diagnosis and management. Elbow dislocation is rare in paediatric due to weaker physeal plate in compare to osteoligamentous attachment. Intraoperatively, to achieve anatomical reduction, arthrogram is mandatory as the cartilage not ossified yet. Large pins are suggested to be inserted from lateral in divergent manner with penetration of both cortices. Excellent outcomes are seen in an appropriately managed patients. Complications such as malunion, growth disturbance and osteonecrosis need to be observed.

**Conclusion:** High clinical suspicion is important to support clinical and radiographic findings for early diagnosis of DHES. Prompt management with arthrogram guided reduction and pinning will ensure good outcome.