SHOULDER INSTABILITY IN PATIENTS WITH EDS

Keith Kenter, MD
Associate Professor
Sports Medicine & Shoulder Reconstruction
Director of Orthopaedic Resident Program
Department of Orthopaedic Surgery
Associate Professor
Department of PM&R
University of Cincinnati

1. Introduction
   a. Individualized treatment
   b. Complex interaction between stability and mobility
   c. Defining EDS type is important and may play a role in treatment outcomes

2. Definitions
   i. Laxity - physiologic term to describe translation motion between humeral head and glenoid socket
   ii. Instability – diagnostic term relating to the inability to maintain humeral head with the glenoid socket
   iii. Subluxation – incomplete/partial dislocation
   iv. Dislocation – complete separation/misalignment of the humeral head and glenoid socket

3. Classifications
   a. Directional
      i. Anterior is more common than posterior
      ii. Multidirectional
         Most commonly seen in patients with increased laxity or in patients with EDS
   b. Mechanism
      i. TUBS – Traumatic Unidirectional shoulder dislocation that typically results in a Bankart labral tear that requires Surgery
      ii. AMBRI – Atraumatic Multidirectional instability that is typically seen in Bilateral shoulders that is best treated with Rehabilitation and if this fails then may need surgical Inferior capsular tightening
      iii. Voluntary – psychiatric evaluation
4. Anatomy of Shoulder Instability
   a. Anatomic Constraints
      i. Static – These include the bony anatomy, intra-articular physical forces, the labrum and ligaments
      ii. Dynamic – the shoulder girdle muscles, most importantly the rotator cuff and shoulder blade (scapula) stabilizing muscles

5. Treatment Options
   a. Non-operative
      Patient education, activity modification, functional braces for sports, NSAIDs
      Formal physiotherapy dedicated to strengthen the rotator cuff and scapular stabilizing muscle groups is extremely important
   b. Operative

   **Addressing the pathoanatomy is the key to success**

   Unfortunately operative results are less predictable in patients with EDS and multidirectional shoulder instability

   i. Open versus Arthroscopic
      Recent studies have shown no significant differences in outcome in non-EDS patients with anatomic lesions when comparing open incision and arthroscopic techniques
   ii. Labral Repair – reattach the labrum to the glenoid rim
   iii. Address Capsular Laxity
      1. Shift – advancing the ligaments to tighten
      2. Plication – pleating/puckering the ligaments to tighten
      3. Thermal – shrinking the ligaments with heat – **DO NOT RECOMMEND**
   iv. Bone Transfers – Bristow, Laterjet, Allografts

6. References


