Voluntary Anterior Dislocation of the Shoulder in a 10-Year-Old Child Treated Surgically

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Dear Sir,

Voluntary dislocation of the gleno-humeral joint, a rare condition, is said to exist when a person is able to dislocate one or both shoulders in one or more direction willfully. It is difficult to treat as several patients have psychiatric co-morbidity and use this unique ability to grab social attention. Treatment usually suggested consists of skillful neglect or a prolonged physiotherapy programme for 3–6 months, aimed at strengthening the rotators and deltoid. Some studies are however encouraging surgical management of this condition (especially in psychologically normal patients) [1–4].

A 10-year-old child presented with ability to dislocate his right shoulder anteriorly, repeatedly at his will. There was no significant history of trauma, any gross congenital anomaly, paralytic disorder or local infection. The patient also had a distressing sensation of instability in shoulder during carrying weight and overhead activities. On clinical examination there was no local swelling, muscular wasting, deformity of shoulder, clavicle, sternoclavicular or acromioclavicular joints, scar or sinus. Scapulae were symmetrical and at normal level bilaterally. No local tenderness or crepitus was appreciated. Range of motion at both shoulders was full and painless. Sulcus test and apprehension sign were present on the affected side. There was no evidence of any distal neurovascular deficit or generalized ligamentus laxity. The patient was able to demonstrate anterior dislocation and reduction of his right shoulder voluntarily. [Fig. 1] X-rays of shoulders and CT scan with 3D reconstruction were normal. Psychiatric consultation didn’t reveal any personality disturbance. A physiotherapy programme to strengthen the rotator cuff muscles didn’t help much. Written informed consent was taken from the patient and his parents for surgery and also for publication.

We managed this patient by an inferior capsular shift procedure with postoperative chest arm immobilization. As described by Neer and Foster the shoulder was exposed through delto-pectoral approach [3]. Capsular volume was found to be increased with marked redundancy inferiorly. The opening between the superior and middle glenohumeral ligaments was closed with non-absorbable sutures. A T-shaped incision was made between the middle and inferior-glenohumeral-ligaments, detaching the capsule and ligaments from the neck of the humerus anteriorly, inferiorly and to the posterior part of the neck. Double-breasting was then performed to eliminate the redundancy with arm in slight flexion and 10° external-rotation and the subscapularis stump closed over it.

Post-operatively patient was kept on shoulder immobilization for 6 weeks after which an arm sling was given and shoulder pendular exercises begun. External-rotation, abduction and flexion were not allowed. Abduction and flexion were allowed at 3 months and rotations at 4 months, discarding arm-sling. The rehabilitation goal for motion was
Normally the humerus is rotated with respect to the glenoid by the coordinated action of the deltoid pulling upward and the subscapularis, infraspinatus, and teres-minor pulling inward against the glenoid and obliquely downward, both acting around an axis in the anteroposterior-plane passing through the humeral head (creating a force couple) and is initiated and sustained by the upward oblique pull of the supraspinatus. The ability to voluntarily displace the humeral-head forward, backward, or inferiorly out of the glenoid is seen when patient achieves abnormal control over some shoulder muscles and is performed by stabilizing the scapula against the thorax (by the rhomboids) and activating one-half of a force couple of the shoulder while the other half (antagonists) are inhibited [1, 2].

Other classical bony and soft-tissue procedures for recurrent shoulder dislocation have been unrewarding in such cases. Neer and Foster treated 40 involuntary and Lefort G et al. 29 voluntary shoulder instability cases by capsular shift procedures [3, 4]. This technique offers the advantage of correcting shoulder instability through one incision without any damage to the articular surface with good results.

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References