Arthroscopic repair of anterior recurrent shoulder dislocation

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It is interesting to note 1hat the first or1hopaedic case , reported inmankind’s oldest book, was a dislocation of the shoulder in an epileptic.The original text, which dates back to 3000 to 2500 Be, was not 1rans1ateduntil 1930. In 1he tomb ofUpuy [Ramses ITin 1200Be]there was a drawing thatwas strikingly similar to Kocher’s me1hod of reduction.The anterior capsule is inserted into 1helabrum in 77 %of cases. Its insertioninto 1heneck of the glenoid, observed in 23 % of cases,created a pouch which couldbe followed from its superior to its inferior margin, and 1hispouch is distinct fromthe subscapularis bursa. This pouch corresponds to 1heredundant anterior capsulewi1hout a Bankart lesion seen in 13 to 28 % of patients operated upon for recurrentdislocation of 1he shoulder. It would thus seen 1hat1hispouch is not necessarilytraumatic in origin [Uh1hoff and Piscopo, 1985 [,The tendon of 1he long head of biceps is one of the most easily identifiedft’uctures and is 1herefore a useful landmark for 1he initiation of an ar1hroscopicexamination of 1heglenohumeral joint. Starting wi1h the arm in neutral rotation andwi1h progressive external rotation, 1hebiceps tendon can be followed from its originto its entry into the bicipital groove. By the basic position one can see only a 1hirdof 1he humeral head. In order to visualize most of 1hearticular surface of the head,one has to rotate 1hear1hroscope superiorly and rotate 1hehumeral head internallyand externally. Inspection of 1helabrum should start at 1heattacbment to the biceps:endon to 1he superior portion of1he labrum. The visualization continues anteriorlyand inferiorly while 1heann is internally rotated to identify 1heanterior labrum.Wi1hadvancement of 1he scope and internal rotation wi1h slight flexion of1he shoulder,1he glenohumeral ligaments are sequentially inspected. They appearar1hroscopically, smoo1h and hypermobile when tested by a probe [Neviaser, 1987The glenohumeral joint is fashioned wi1h a minimum of bony constraint. Thelargely spherical humeral head rotates in 1he shallow, small diameter glenoid cavity.The angle of inclination of the glenoid fossa wi1h 30 degrees retroversion of1hehumerus, allows placement of 1he ann above 1he head. The ligaments of 1heglenohumeral joint are so constructed and arranged to hold 1hehumeral head in a sling fashion. There are no true collateral ligaments in 1he shoulder to limit motionin 1he frontal plane. The gliding mechanisms [scapulo1horacic, subacromial, andbicipital] wi1h 1heacromioclavicular and sternoclavicular synovial joints facilitate1he glenohumeral joint to reach its large range of motion, by rotating 1heclavicleand 1hescapular spine [Radin, 1978].The

initial injury is responsible for 1hedamage which subsequently leads torecurrence of dislocation. This damage occurs simUltaneously to 1heglenoid rimand soft tissues in front, and 1he head of 1he humerus behind. There is animpairment of 1he restraining anterior labrum-capsular check to forwarddisplacement of 1he head of'the humerus during elevation and outward rotation of1he ann. The head is 1hen able to dislocate forwards into a traumatic hernia ofcapsule lying underneath the damage subscapularis. The associated lesion on the postero-lateral aspect of the humeral head occurs at 1he time of the initial dislocation. As the head of the humerus is levered outward across the rim of the glenoid, the articular surface is damaged to a degree varying from mild scarificationof the articular cartilage to a deep round-shaped depression [Hill-Sach's lesion] [Kessel, 1982].Technology, as well as .the technical ability of some arthroscopic surgeons,has improved dramatically in recent years. There are only five main methodsdescribed for arthroscopic repair of anterior recurrent shoulder dislocation, at thesame time three other modifications are mentioned. These could be classified into two types ofrepair; 1- Repair by suture.2 - Repair by different types offixators.Repair of recurrent shoulder dislocation by suture was first mentioned byMorgan and Bodenstab 1987. Then, new techniques with the same idea werecreated by Rose 1989, Maki 1990, and.Caspari and McIntyre 1993. Repair bydifferent types of fixators mentioned by Johnson 1986 using staples, Wiley 1988 using rivet, Warren 1991 using acufex suretac system, and Wolf 1990 using suture hooks. In this technique Bankart lesion was repaired percutaneuosly and anteriorlyunder the comrol of the arthroscopic guides, through a posterior portal, using a very simple curved large aneurysmal needle. By this technique the anterior pouchcan be closed following the abrasion of the anterior glenoid rim to obliterate the space at which the humeral head escapes during dislocation. Moreover, this technique plicates the anterior shoulder muscles especially the subscapularis as thewhole procedure should be performed while the arm internally rotated andadducted. This plication of -the anterior capsule and the anterior shoulder muscleslooks like the principle ofPutti Platt operation without open surgery.The clinical results of this series [94.2 %] appear to have achieved its goal. All these shoulders that gained full painless range of motion particularly externalrotation, represent a significant advantage over most standard open anterior procedures and also other arthroscpic techniques. Also, the simplicity and theabsence of special instrumentation, special angles,or even special skillness gives thisnew technique a great potential promise for the future.