

SWESEMs utbildningsutskott

Rubrik

Axelluxation främre, reponering

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Introduktion

Främre luxation av caput humeri i humeroskapularleden, främre axelluxation, är en vanlig luxation som handläggs och reponeras på akutmottagningen.¹ Främre axelluxation kännetecknas av följande kliniska fynd²:

- Patienten håller armen abducerad lätt utåtrotterad.
- Patienten kan inte lägga handen på motsatt axel.
- Den normala skulderkonturen av musculus deltoideus försvinner; istället är akromion prominent ("squaring of the shoulder")

Det finns olika metoder för att reponera en främre axelluxation. Önskvärda metodegenskaper är:

- framgångsrik reponering i majoriteten av fallen
- komplikationsfri inklusive smärtfri, utan behov av djup sedering
- snabb och enkel att genomföra
- inget behov av särskild utrustning eller mycket personal

SWESEMs utbildningsutskott rekommenderar följande fem slutna reponeringstekniker med hänsyn till egenskaperna ovan.

- Utåtrotation
- Milch
- Stimson
- Skapulamanipulation
- Traction-countertraction

Eftersom ingen teknik är 100% framgångsrik³ bör en specialist i akutsjukvård kunna flera av dessa tekniker, som antingen utförs sekventiellt eller i kombination.

Vid specialisttentamen

Vid specialisttentamen kommer läkaren att få uppvisa färdighet i handläggning av främre axelluxation, inklusive valfria tre reponeringstekniker ovan. Handläggningen kommer att bedömas enligt följande mall, och godkänd helhetsbedömning är obligatorisk för godkänt moment.

Indikationer / kontraindikation för slutna reponering⁴

- Samtidig fraktur av tuberkulum majus eller Bankartfraktur är inte kontraindikationer till reponering
- Neurovaskulära bortfall är inte kontraindikation för försiktig slutna reponering. Om reponeringen inte går lätt bör öppen reposition göras på operation under anestesi.
- Samtidig fraktur i collum chirurgicum är en kontraindikation till reponering

1-Förberedelser

Kontrollerar neurovaskulärt status⁵ med:

- Känsl för stick över den laterala delen av överarmen (n axillaris)
- Kraft vid handledsextension (n radialis), tumopponering (n medianus) och fingerspretning (n ulnaris)

Radialispuls

Beslutar adekvat om röntgen före reponering⁶ (alla utom patient med atraumatisk recidivlux)

Ger adekvat intraartikulär, regional (interskalenär plexusanestesi) eller systemisk bedövning vid behov

Vid intraartikulär bedövning⁷:

- Sticker 2 cm kaudalt om akromions laterala rand
- Aspirerar eventuellt intrartikulärt blod
- Injicerar 10-20 ml Lidokain 1%
- Väntar 15-20 minuter

2-Reponering

Utåtrotation⁸:

- Patient liggande på rygg med den påverkade armen adducerad intill kroppen
- Läkaren håller med den ena handen patientens armbåge flekterad 90 grader
- Läkaren håller med den andra handen patientens hand eller handled och roterar sakta armen utåt, med uppehåll vid smärta, tills underarmen ligger i koronarplanet

Milchs teknik⁹:

- Den påverkade armen abduceras fullt, antingen aktivt (patienten böjer armbågen, abducerar i axeln och sätter handen bakom huvudet) eller passivt (läkaren håller i armbågen eller handleden under abduktionen)
- Läkaren drar i den påverkade armen (humerus längsriktning) och roterar den utåt
- Vid behov trycker läkaren med den andra handen på caput humerus för att trycka det tillbaka in i fossa glenoidalis

Stimsons teknik¹⁰:

- Patienten ligger på magen med den påverkade armen pekande mot golvet, dvs 90 grader flexion i axeln, och med caput humeri utanför britsens sida.
- Kontinuerligt drag motsvarande ca 2,5 – 5 kg i humerus längsriktning under 20-30 minuter, antingen manuellt drag, eller annan vikt fäst vid armen/handleden
- Vid behov kan utåtrotation och/eller skapulamanipulation läggas till

Skapulamanipulation¹¹:

- Patienten kan vara liggande på magen (enklast) eller i ryggläge
- Den påverkade armen flekteras 90 grader i axeln och dras i armens riktning; om patienten är liggande på magen dras armen mot golvet (som vid Stimsons teknik)
- Läkaren identifierar den nedre spetsen av skapulan, apex, och trycker den i medial riktning med den ena handen
- Med den andra handen stabiliserar läkaren den övre delen av scapula (tummen av denna hand kan bidra till medial förflyttning av den nedre spetsen av scapulan)
- Vid behov kan utåtrotation av humerus läggas till

Drag-motdrag (Traction-countertraction¹²):

- Patienten ligger på rygg.

- Ett lakan placeras runt patientens bröstorg i axillnivå på den påverkade armen. En medhjälpare på friska sidan har andra delen av lakanet kring sin midja och lutar sig bakåt.
- Ett annat lakan placeras i armvecket på den påverkade armen. Armbågen flekteras 90 grader eller mer; den andra delen av lakanet placeras kring läkarens midja. Läkaren håller i underarmen och lutar sig bakåt så att den påverkade armen dras i överarmens längsriktning, med skuldran lätt abducerad.
- Vid behov kan utåtrotation av den påverkade armen läggas till

Sammanfattande tabell

Metod	Utåtrotation	Milch	Stimson	Skapula-manipulation	Drag / motdrag
Patientposition	Rygg	Buk/rygg	Buk	Buk/rygg/sittande	Rygg
Armposition	0 flexion 0 abduktion 90 armbåge	Full abduktion	90 flexion 0/90 armbåge	90 flexion 0/90 armbåge	30 abduktion >90 armbåge
Grundrörelse humerus	Långsam utåtrotation	Traktion i längsriktning, utåtrotation	Traktion i längsriktning, 2,5-5 kg 20-30 min	Traktion i längsriktning, Apex scapula roteras medialt	Traktion i längsriktning, motdrag i axillen
Kompletterande rörelse	-	Tryck i armhålan mot caput humeri	Utåtrotation, skapula-manipulation	Utåtrotation	Utåtrotation

Metod	1	2	3
Positionerar patienten korrekt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Positionerar armen korrekt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utför grundrörelse korrekt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utför kompletterande rörelse korrekt			

3-Kontroller

- Bekräftar caput humeris reponerade läge genom att sätta patientens hand på den friska kontralaterala axeln¹³ (passiv adduktion)
- Upprepar neurovaskulärt status¹⁴
- Immobiliserar leden enligt lokala rutiner¹⁶
- Beställer kontrollröntgen¹⁵
- Beställer ortopedisk uppföljning¹⁷

4-Teknik/Helhetsbedömning

- Genomför färdigheten på ett patientsäkert sätt (avseende kontraindikation, analgesi mm) och ändamålsenligt sätt (kontinuerlig långsamt ökande traktion, ej provocerande muskelförsvar)
- Uppvisar förtrogenhet med handgreppen

ANTECKNINGAR

1-Prevalens

“Anterior dislocations of the shoulder are the most common major joint dislocation encountered, and reduced, in the ED.” (Ufberg 2009)

2-Igenkännande

“The patient with an anterior shoulder dislocation supports the injured extremity and leans toward the injured side, holding the arm in abduction with slight external rotation. The patient cannot adduct or internally rotate the shoulder. Visual inspection reveals loss of the rounded appearance of the shoulder due to the absence of the humeral head beneath the deltoid region. The acromion is prominent and an abrupt drop-off below the acromion can be seen or palpated. An anterior fullness in the subclavicular region is visible in thinner individuals and is easily palpable in most others. Comparison with the uninjured side is a useful aid for both visual examination and palpation. Any attempt at internal rotation is quite painful and is resisted by the patient. The inability to place the palm from the injured extremity on the uninjured shoulder is consistent with anterior shoulder dislocation.” (Ufberg 2009)

3-Val av teknik

“Ideally, the emergency clinician should become familiar with a number of different techniques for reducing anterior dislocations of the shoulder, because no single method has a 100% success rate nor is any technique ideal in every situation.” (Ufberg 2009)

“It is important for the physician to be comfortable with two or three techniques in case of a failed first attempt. Considerations in selection of a technique include ease of performance, effectiveness, requirement for sedation, number of assistants, and duration.” (Rudzinski 2011)

SWESEMs utbildningsutskott rekommenderar kännedom av följande fem teknik:

- Extern rotation
- Milch
- Stimson maneuver
- Scapular manipulation
- Traction-countertraction

Dessa teknik använder följande rörelser ensam eller i kombination med varandra:

- Traktion
- Extern rotation
- Rotation av scapula

4-Indikation / kontraindikation för closed reduction

“Fractures of the humeral neck are frequently displaced with attempts at closed reduction, the result of which is often avascular necrosis of the humeral head.” (Ufberg 2009)

“The presence of a neurologic deficit does not preclude closed reduction, but in the presence of a nerve injury, multiple forceful attempts at reduction should be avoided. Brachial plexus injuries require an especially atraumatic reduction. If generous sedation/analgesia does not permit an easy reduction in the ED, reduction of the dislocation with a nerve injury may be more prudently performed in the operating room with the patient under general anesthesia” (Ufberg 2009)

“The presence of a fracture of the greater tuberosity does not change the initial management of anterior shoulder dislocations, and these fractures usually heal well after closed reduction in the routine fashion.” (Ufberg 2009)

“Impaction of the humeral head against the glenoid during dislocation may cause a disruption of the glenoid rim, known as a Bankart lesion. This has been implicated as one cause of recurrent dislocations, but does not affect immediate ED management.” (Ufberg 2009)

5-Neurovascular status före reponering

“A careful assessment of the neurovascular status of the affected extremity is essential. Injury to the axillary artery is rare, usually occurring in the elderly, and can be quickly assessed by palpation of the radial pulse or the presence of an expanding hematoma. It is important to assess the status of the axillary nerve, because this is the most common nerve lesion resulting from anterior dislocations. The sensory component of the axillary nerve is assessed by testing for sensation over the lateral aspect of the upper arm. The motor component of the axillary nerve would be tested by assessing the strength of the deltoid muscle, a difficult undertaking in the patient with a dislocated shoulder. Less commonly, the brachial plexus may be injured by a stretch injury, producing variable nerve deficits. The neurologic examination should include a complete assessment of all major nerves to the arm, because other nerve injuries such as to the ulnar and radial nerves may occur.” (Ufberg 2009)

“Test the integrity of the nerve by assessing sensation to pin prick (1) in its distribution over the “regimental badge” area. (The shoulder is usually too painful to allow assessment of deltoid activity with certainty.) Look for other (rare) involvement of the radial portion of the posterior cord (2) and involvement of the axillary artery (3)” (Ufberg 2009)

“Nerve injuries, which occur in 10% to 25% of acute dislocations, are the result of traction neurapraxia. Most involve the axillary nerve. This injury is temporary and resolves spontaneously. The common test of sensation over the skin of the deltoid muscle may not be reliable. Other nerves that may be injured are the radial, ulnar, median, musculocutaneous, and brachial plexus.” (Rudzinski 2011)

“The reported incidence of axillary nerve injuries after anterior glenohumeral dislocation ranges from 5 to 54%, and they are more frequent in patients older than 50 years of age. Axillary nerve function can be assessed by testing for sensation over the lateral aspect of the shoulder and by testing motor function of the teres minor and deltoid muscles. Deltoid function is tested by having the patient attempt shoulder abduction while the examiner feels for muscle contraction. Motor testing is more accurate because sensory testing can be misleading owing to the presence of overlapping cutaneous nerve root dermatomes.” (Daya 2009)

6-Röntgen före reponering

Émond et al (Émond 2009) utvecklade en klinisk beslutsregel (Quebec shoulder dislocation rule) för att förutse kliniskt viktiga frakturer hos patienter med främre axelluxation. Enligt deras regel förekom fraktur hos patienter < 40 årsålder enbart i följande sammanhang:

- Fight / assault
- Fordon olycka
- Sporting injury
- Fall from more than patient's height

En studie av patienter under 40 årsålder som sökte till akuten i Australien med främre eller bakre axelluxationer visade dock en begränsad sensitivitet (42%) och specificitet (40%) av regeln (Ong 2011).

Tills validering av en klinisk beslutsregel bör axelröntgen genomföras som regel före reponering: "Prereduction radiographs are advisable when there has been significant trauma, unless time is crucial because circulation is threatened. Radiographs are needed because dislocations and fracture-dislocations may have a similar appearance on physical examination, but the techniques used to treat them may be very different. **Shoulder dislocations or sublaxations combined with proximal humerus fractures generally require orthopedic consultation and may need operative repair.**" (Rudzinski 2011)

I praktik kan man dock motivera att inte genomföra en röntgen hos en patient med uppretrade axelluxationer som inkommer med en atraumatisk luxation: "in clinical practice films are sometimes omitted in patients with a history of multiple recurrent dislocations of the shoulder who present with history, signs, and symptoms typical of another recurrence in the absence of significant trauma." (Rudzinski 2011)

7-Lokal bedövning intraartikulärt

"Under sterile conditions, insert a 35-mm needle (18-20 ga) 2 cm inferior to the lateral edge of the acromion into the glenohumeral joint" (Aponte 2011)

"Muscle relaxation and analgesia also can be provided through intra-articular injection of a local anesthetic agent. This technique is especially useful when procedural sedation is contraindicated. Under sterile technique, the joint is entered 2 cm inferior to the lateral edge of the acromion using an 18-gauge or 20-gauge needle. Any associated hemarthrosis is aspirated; then 20 mL of 1% lidocaine is injected over 30 seconds. The patient is allowed to relax for 15 minutes before reduction is attempted." (Daya 2009)

"Intra-articular injection of 10 to 20 mL 1% lidocaine (10 mL provides a total dose of 100 milligrams of lidocaine) reduces the pain associated with reduction, and is now a widely used alternative or complement to procedural sedation. After sterile skin preparation, introduce the needle at the hollow created by the displaced humeral head, just inferior to the acromion." (Rudzinski 2011)

"Intra-articular injection for the reduction of an acute anterior shoulder dislocation can be very effective. A, After aspirating blood from the joint, 10–20 mL of 1% plain lidocaine is slowly injected through the lateral sulcus, aiming slightly caudad. B, Anterior view. Allow 15–20 min for the lidocaine to take effect." (Ufberg 2009)

"In studies by Matthews and Roberts²¹ and Kosnick and colleagues, the use of intra-articular lidocaine was found to offer significant pain relief during reduction of anterior shoulder dislocations, making it a useful alternative to procedural sedation and analgesia. When using intra-articular lidocaine, any blood should be aspirated from the glenohumeral joint before injecting anesthetic. Note that 10 to 20 mL of 1% lidocaine has been used with the intra-articular technique, and it may take as long as 15 to 20 minutes for adequate analgesia." (Ufberg 2009)

8-Utåtrotation

“This method offers the advantage of requiring only one person and no special equipment. The technique requires no strength or endurance on the part of the operator and is well tolerated by patients. The actual pain experienced by patients with this technique has not been quantified, but Plummer and Clinton stated that it can be performed with “little, if any sedation.” In this technique, the basic maneuver is slow, gentle external rotation of the fully adducted arm” (Ufberg 2009)

“Since Parvin’s initial study, this method has been described with the patient supine and the affected arm adducted tightly to the side of the patient. The elbow is flexed to 90° and held in the adducted position with the operator’s hand closest to the patient. The other hand holds the patient’s wrist and guides the arm into slow and gentle external rotation. The procedure may require several minutes, because each time the patient experiences pain, the procedure is momentarily halted. Although the report of Mirick and coworkers¹ mentioned using the forearm as “a lever,” a later description clearly recommends allowing the forearm to “fall” under its own weight. No additional force should be applied to the forearm and no traction is exerted on the arm. The end point of the reduction may be difficult to identify, because reduction is frequently very subtle. It is therefore recommended to continue the external rotation until the forearm is near the coronal plane (lying on the bed, perpendicular to the body), a process that usually takes 5 to 10 minutes. If the patient notes persistent dislocation with full external rotation, steady gentle traction at the elbow may be added at this time. Reduction may occasionally be noted when the arm is rotated back internally. The success rate of this technique in three series performed by emergency clinicians was around 80%.” (Ufberg 2009)

9-Milch

“Proponents of this method praise its gentle nature, high success rate, lack of complications, and tolerance by patients. It can be described as “reaching up to pull an apple from a tree.” The basic steps of this technique are abduction, external rotation, and gentle traction of the affected arm. Finally, if needed, the humeral head is pushed into the glenoid fossa with the thumb or fingers.” (Ufberg 2009)

“The primary step in this technique is to have the affected arm abducted to an overhead position. Russell and colleagues had their patients raise the arm and put the hand behind the head as a first step. Although this seems odd, patients can usually do this quite readily with little assistance and be quite comfortable in this position. Alternatively, the operator may abduct the arm by grasping the patient’s arm at the elbow or the wrist. Lacey and Crawford found that the prone position, with the patient’s shoulder close to the end of the bed, facilitated this step.” (Ufberg 2009)

“Once the arm is fully abducted, gentle longitudinal traction is applied with slight external rotation. If reduction does not occur quickly, the humeral head can be pushed upward into the glenoid fossa using the thumb or fingers of the other hand. Beattie and associates reported a success rate of 70% with the Milch technique, but others report success rates of 90% or greater.” (Ufberg 2009)

10-Stimson Maneuver

“The Stimson maneuver is a classic technique that offers the advantage of not requiring an assistant. The patient is placed prone on an elevated stretcher and about 2.5 to 5.0 kg (5–10 lb) of weight is suspended from the wrist. The weights can be strapped to the wrist or a commercially available Velcro wrist splint can be placed and the weights hung from this with a hook. The slow, steady traction of this method often permits reduction, but it may take 20 to 30 minutes. Reduction may be facilitated by gentle external rotation of the extended arm. Variations of this method include the recommendation for flexion of the elbow to further relax the biceps tendon and the application

of manual traction instead of weights. Rollinson allowed the arm to hang under its own weight after a supraclavicular block and reported a 91% success rate with usually no more than a gentle pull on the arm after 20 minutes in this position. Each variation of the Stimson method can be used in combination with the scapular manipulation technique described later. Indeed, a success rate of 96% has been reported using the combined prone position, hanging weights, IV drug therapy, and scapular manipulation.” (Ufberg 2009)

“Disadvantages of the Stimson method include the time required and the danger of patients slipping off the elevated bed. A “seatbelt” strap or bedsheet may be placed around the patient and stretcher to avoid patient movement off the stretcher. In addition, a bed that elevates to a suitable height for the patient’s arm length, a convenient method to hang the weights, the weights themselves, and adequate staff to monitor the patient are often difficult to locate and organize in a busy ED.” (Ufberg 2009)

11-Scapular manipulation

”This method is popular owing to its ease of performance, reported safety, and acceptability to patients. To date, no complications from this technique have been reported in the literature. Shoulder reduction using this method focuses on repositioning the glenoid fossa rather than the humeral head, and it requires less force than many other methods. The success rate is high, generally greater than 90% in experienced hands.

The initial maneuver for scapular manipulation is traction on the arm as it is held in 90° of forward flexion. This may be performed with the patient prone and the arm hanging down, as described in the Stimson method, with or without flexion of the elbow to 90°. Alternatively, this traction may be applied by the operator placing an outstretched arm over the seated patient’s midclavicle while pulling the injured extremity with the other arm. Regardless of the means of arm traction, slight external rotation of the humerus may facilitate reduction by releasing the superior glenohumeral ligament and presenting a favorable profile of the humeral head to the glenoid fossa.” (Ufberg 2009)

”The prone patient position is recommended for those not familiar with the technique, because it facilitates identification of the scapula for manipulation (medial rotation of the tip). Nonetheless, the technique can be performed with the patient supine, given that the patient’s shoulder is flexed to 90° and the scapula is exposed during gentle upward traction on the humerus. Although seated scapular manipulation offers the advantage of not requiring the patient to go through the awkward and potentially uncomfortable assumption of the prone position, it is a technically more difficult variation of scapular manipulation, especially if sedation is going to be necessary. When placing the patient in the prone position, it is important to place the injured shoulder over the edge of the bed to allow the arm to hang perpendicularly for the application of traction.

After application of traction, the scapula is then manipulated to complete the reduction. Anderson and associates recommended manipulation of the scapula after the patient’s arm is relaxed; however, success is possible with no delay in the performance of this second step. Manipulation of the scapula is carried out by stabilizing the superior aspect of the scapula with one hand and pushing the inferior tip of the scapula medially toward the spine. The thumb of the hand stabilizing the superior aspect of the scapula can be placed along the lateral border of the scapula and used to assist the pressure applied by the thumb of the other hand. A small degree of dorsal displacement of the scapular tip is recommended as it is being pushed as far as possible in the medial direction.

When the patient is properly positioned, with the affected arm hanging perpendicularly, the lateral border of the scapula may be difficult to find in larger subjects. This border is generally located quite laterally with the patient in this position, and it must be properly located before any reduction attempt. The reduction itself is occasionally so subtle that it may be missed by both the patient and the operator. A minor shift of the arm may be the only clue to the successful reduction. Careful palpation of the subclavicular area in order to locate the position of the humeral head before repositioning the patient may be used to determine the success of the reduction.” (Ufberg 2009)

12-Traction-Countertraction

”This method is commonly used in the ED, largely out of tradition, because it has a high rate of success and many emergency clinicians are most comfortable with it. Familiarity is an advantage of this technique, but it requires more than one operator, some degree of force, and occasionally, endurance. This technique is usually quite uncomfortable for the patient, and premedication is recommended before any attempt.” (Ufberg 2009)

“With the patient supine, a sheet or strap is wrapped around the upper chest and under the axilla of the affected shoulder. An assistant holds this sheet, preferably by wrapping the sheet around the waist to take advantage of body weight rather than arm strength, to apply the countertraction. The operator’s foot should not be used in the axilla to provide countertraction. Traction may then be applied to the extended arm, but this generally results in operator fatigue, especially if the operator relies on biceps strength to provide continuous traction. Preferably, the elbow of the affected side is flexed to 90° and a sheet or strap is wrapped around the proximal forearm and then around the operator’s back. The bed should be elevated to a point at which the sheet can sit at the level of the operator’s ischial tuberosities. This allows the operator to comfortably lean back and use the body weight to supply the force of traction, eliminating the possibility of operator fatigue. The portion of the sheet that is positioned on the patient’s forearm has a tendency to ride up; flexion of the elbow beyond 90° will minimize this problem. Alternatively, the operator merely leans backward with the arms fully extended, again using the continuous weight of the body rather than the strength of the biceps to provide constant traction.” (Ufberg 2009)

“Once traction is applied, the operator must be patient, because the procedure may take a number of minutes to be successful. Inadequate premedication is noted by the patient who resists the procedure or is notably uncomfortable during the reduction attempt. The operator should not hesitate to order supplementary medications. Gentle, limited external rotation is sometimes useful to speed reduction.¹⁰ Applying traction to an arm that is slightly abducted from the patient’s body is often successful, but some operators prefer to slowly bring the arm medial to the patient’s midline while maintaining traction or to have an assistant apply a gentle lateral force to the midhumerus to direct the humeral head laterally. Successful reduction is usually presaged by slight lengthening of the arm as relaxation occurs, and a noticeable “clunk” may occur at the point of reduction. A brief fasciculation wave in the deltoid may also be seen at the time of reduction.” (Ufberg 2009)

13-Förmåga att sätta handen på kontralateral frisk axel

“Indirect evidence that the reduction has been successful includes an immediate reduction in pain, restoration of the round shoulder contour, and increased passive mobility of the shoulder. No harm is done by putting the joint through a limited range of motion. If the patient can tolerate placement of the palm from the injured arm on the opposite shoulder, it is quite likely that the shoulder reduction was successful” (Ufberg 2009)

14-Upprepa neurovascular undersökning

“After an attempt at reduction, the neurovascular status of the affected extremity should be rechecked and the results documented on the patient record.” (Ufberg 2009)

15-Kontrollröntgen

“Postreduction radiographs are often recommended, with a careful search for new fractures. Although most greater tuberosity fractures do not alter patient management, patients with greater tuberosity fractures displaced greater than 1 cm after closed reduction are almost always associated with a rotator cuff tear and should receive prompt orthopaedic consultation, because they may require operative repair.” (Ufberg 2009)

“Postreduction radiographs are valuable for confirming the success of the procedure, as well as for providing documentation, in the event the joint re-dislocates after the patient is discharged from the ED.” (Rudzinski 2011)

16-Immobilisering

“Traditional postreduction treatment has focused on the importance of preventing the shoulder from dislocating after discharge. This is best accomplished by immobilizing the joint using a commercially available shoulder immobilizer or abduction.

“Since the early 2000s, the wisdom of immobilization in internal rotation has been questioned. Several studies have shown that placing the arm in internal rotation actually increases labral detachment from the glenoid rim, whereas some degree of external rotation maximizes contact between the detached labrum and the glenoid rim. In one study, cadavers were used to measure the force of contact between the labrum and the glenoid rim in different arm positions. The authors of this study found that maximal contact force was actually generated in 45° of external rotation, whereas no contact force was generated with the arm in internal rotation. One prospective study showed that none of 20 patients immobilized in external rotation had recurrent dislocation after more than 1 year, compared with 6 of 20 patients immobilized in internal rotation. Despite this growing body of evidence, very little scientific data remain to guide the clinician on the most appropriate position for postreduction immobilization of anterior shoulder dislocations. In fact, a recent literature review designed to assess (1) whether traumatic anterior shoulder dislocations should be immobilized, (2) how long they should be immobilized, and (3) whether the position of immobilization affects outcomes was unable to provide any definitive answers. According to the author of this study, “much of this uncertainty is due to the limited size of the evidence base, which exhibited numerous methodological weaknesses (e.g., small sample sizes, no control groups, not evaluating findings against statistical tests).”

“As a result, it is not unreasonable to immobilize the extremity in a manner consistent with the orthopaedic surgeons at one’s institution until further evidence is presented. When in doubt, a simple sling or the traditional shoulder immobilizer will certainly suffice pending 5- to 7-day follow-up” (Ufberg 2009)

“In uncomplicated cases, the shoulder is immobilized for 3 to 6 weeks in younger patients and for 1 to 2 weeks in those who are older than 40 years.” (Daya 2009)

17-Uppföljning

Orthopaedic follow-up is recommended for all anterior shoulder dislocations because the incidence of rotator cuff injury is as high as 38% and might complicate restoration of normal function.

Younger patients are usually immobilized for approximately 3 weeks and can be instructed to follow up within 1 or 2 weeks of the event. As a general rule, the older the patient, the shorter the time of immobilization. Those older than 60 years should have early follow-up (e.g., 5–7 days) to allow for early mobilization and avoidance of persistent or permanent shoulder joint stiffness.” (Ufberg 2009)

“A frequent but often missed injury is a tear of the rotator cuff. The rotator cuff weakens with advancing age, and as many as 86% of patients >40 years old with an anterior dislocation have an associated rotator cuff tear. Pain or weakness 2 to 4 weeks after a glenohumeral dislocation is an indication for MRI or arthrogram. Early diagnosis is important because prompt surgery yields the best results.” (Rudzinski 2011)

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