



# A New Method for Reduction of Shoulder Dislocations



**L Prakash\***

*Institute for Special Orthopaedics, India*

**\*Corresponding author:** L Prakash, Institute for Special Orthopaedics, 29, Karuneeagar Street, Nerikundrum, Chennai -600107, India

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## Abstract

A new method of reduction of anterior dislocations of shoulder is described, which requires neither analgesia or anaesthesia/ pre-med, assistants, or traction, is reproducible, and yet provides reduction in almost every case including dislocations delayed up to three months. Several methods of reducing an acute anterior dislocation of the shoulder have been described [1-24]. Around ten years back, the author introduced a different method, in which the shoulder was reduced painlessly, and without anaesthesia in 87 consecutive cases over a decade, including delayed and neglected dislocations of up to three months duration.

The method was announced and described by an internet video in May 2016, and since then more than twenty thousand shoulders have been reduced in various centres of the world with ease, without anaesthesia, and with reproducible success in every case, if it was done exactly the same way as described by the author. This paper describes the method, and analyses the results of the first hundred and forty seven cases reduced by this method.

## Context

This prospective study has been performed in Madras Central Prison, for over ten years where about a hundred patients with anterior shoulder dislocations were managed successfully and subsequently 47 patients were managed in two years of clinical practice. With extremely restricted medical facilities, and complete lack of aesthetic drugs this procedure was developed under duress. The first patient to be reduced had dislocated his shoulder 19 days prior. The second dislocation was 11 days old and the third one was 89 days later. Almost three months old. In each case the reduction was almost automatic, painless and effortless both for the surgeon and patient since the video publication of the method thousands of successful procedures have been reported from the world over within two months, and many more are being reported or communicated each day [25-29].

## Aims

To evaluate the efficiency of the Prakash's Method in reduction of Anterior Dislocation of the Shoulder (gleno-humeral) Joint.

## Settings and design

A hundred and forty seven consecutive shoulder dislocations, from immediate to three months old, including sixteen with associated fractures, were reduced by the author, by this method without anaesthesia or analgesia. There were no failures. The average reduction time was four and a half minutes, with a minimum of three and maximum of six minutes. Subsequent efforts by other surgeons in other centers also produced identical results, confirming the fact that this is very useful tool in the armoury of those dealing with this type of injuries.

## Methods and Material

This is a prospective study conducted among convict prisoners and staff members of Madras Central Prison between 2003 to 2014. Eighty seven prisoners and thirteen prison guards and officers, who dislocated their shoulders over a ten year period, were treated by this method. Data recorded included duration since dislocation, mode of injury, the time needed to complete the reduction from the start of the procedure, and the number of attempts at reduction. The patient rated the pain during the reduction as none, mild, moderate, or severe, and these ratings were given a score on a 4-point scale with 1 indicating no pain and 4, severe pain. Complications, if any, were also noted.

## Method for reduction of shoulder dislocations: technique

The diagnosis was confirmed by clinical examination and X-Ray findings using an anteroposterior radiograph. A neurovascular examination of the extremity and a thorough examination for coexisting injuries were carried out. The principle of this method is that traction has no role in reduction of shoulder dislocations. These are purely rotational and lateral translation injuries and the reduction too is performed by rotations and lateral translations. The patient either stands with his back to the wall to fix his scapula. Else he sits on a chair with a back rest and pushes his back against the chair to fix his scapula. This procedure does not work as effectively in supine or prone positions. No assistant is needed and the surgeon easily and single handedly performs this procedure. The forearm is held by the elbow and wrist and the following sequence is deployed.

- Slow gentle external rotation until the arm is fully externally rotated. There should be no attempt at abduction or

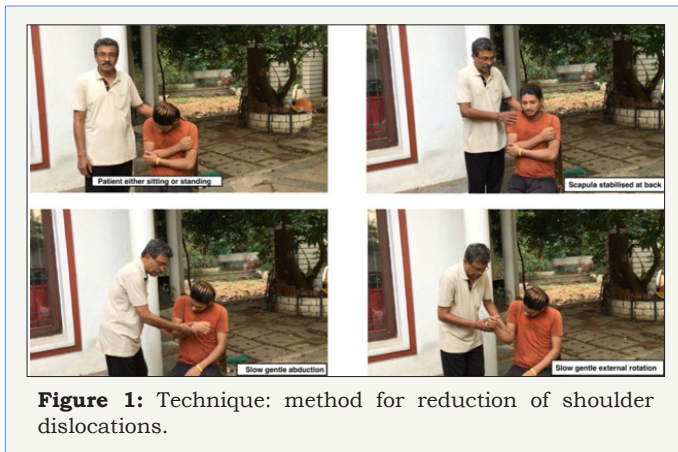
adduction. The external rotation should be done with the arm in its original position. This step is performed very gently and slowly, often taking up to a minute. The forearm acts as a long lever arm to achieve the external rotation.

b. The limb is kept in external rotation for two to three minutes by the clock. The patient is engaged in conversation so that his attention is diverted during this step, as this is the painful part. This is the most important step, and performing it properly is essential for this method.

c. The limb is now slowly adducted in external rotation till the elbow comes over the body.

d. The limb is now slowly internally rotated so that the fingers touch the opposite shoulder.

The shoulder glides in majestically without any audible clicks, clunks or sounds. The average time taken for the procedure is there to four minutes (Figure 1).



**Figure 1:** Technique: method for reduction of shoulder dislocations.

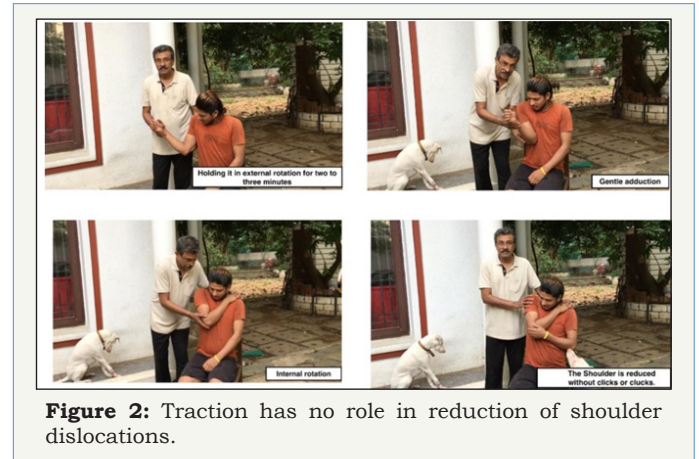
**Level of evidence: Therapeutic study, Evidence level 4.**

**Results**

The study done at Madras Central Prison, for over ten years had a hundred patients with anterior dislocation of the shoulder were reduced successfully, and subsequently 47 patients were managed in two years of clinical practice.

**TABLE 1:**

Reduction Method	Year	Author (References)	No. of Patients	Success No. (Rate)
Traction-Counetrtraction	1984	Boger et al. [2]	47	43 (92%)
Snowbird looped technique	1995	Westin et al. [4]	118	114 (97%)
Chair	1992	Noordeen et al. [5]	322	3 (72%)
Spaso	2001	Yuen et al. [8]	16	14 (88%)
Eskimo	1988	Poulsen [13]	23	17 (74%)
Mulch	1982	Janecki et al. [14]	50	50 (100%)



**Figure 2:** Traction has no role in reduction of shoulder dislocations.

- Age: The age distribution was between 18 and 78.
- Patient's age and numbers.
- Sex: All patients were males.
- Side: Right shoulder was dislocated in 110 and left in 37, indicating the preponderance of dominant hand involvement (Figure 2 & 3).
- Mechanism of injury: In all cases it was rotation lateral translation injury.
- Duration since dislocation: Minimum ten minutes to maximum 89 days.
- Time taken for reduction: Three to six minutes with an average of four and a half minutes.
- Pain during manipulation: Grade one (no pain) in 116 patients, Grade 2 and 3 in 30 patients and grade 4 in one patient, the oldest in the group. The patient selection might also be a cause for this finding, as all patients were prisoners or prison staff with high pain threshold.
- Number of attempts: Every shoulder reduced in a single attempt and manoeuvre.
- Complications and failures: None (Table 1).

Mulch	1992	Johnson et al. [15]	142	122 (86%)
Mulch	1981	Russel et al. [16]	76	68 (89%)
Mulch	1986	Beattie et al. [17]	56	39 (70%)
Kocher	1986	Beattie et al. [17]	55	40 (73%)
Modified Milch	1992	Garnavos [19]	75	71 (95%)
Kocher without traction	2000	Berkenblit et al. [23]	28	23 (82%)
External rotation	1990	Thakur et al. [24]	14	14 (100%)
External rotation with traction	1990	Banerjee [25]	44	38 (86%)
Scapular manipulation	1992	Kothari et al. [31]	48	46 (96%)
Auto-reduction	1997	Ceroni et al. [32]	100	60 (60%)
Scapular manipulation-seated	1993	Mc Namara [35]	61	48 (79%)
External rotation	1986	Danzl et al. [43]	100	78 (78%)
External rotation	1991	Jeyarajan et al. [44]	42	40 (95%)
External rotation	1977	Leidelmeyer [46]	50	50 (100%)
Pulsion & traction-elderly	1980	Manes [48]	39	35 (90%)
Scapular manipulation	1982	Anderson et al. [49]	51	47 (92%)
Kocher	1973	Royle [53]	39	37 (95%)
External rotation	1979	Mirick et al. [54]	85	68 (80%)
Modified Milch	1989	Canales Cortes et al.	128	107 (84%)

## Discussion

More than 50-60% of dislocations of large joints involve the shoulder (glenohumeral) [30-34]. Up to 90-96% of shoulder dislocations are anteroinferior [35,36]. Most dislocations can be reduced in the emergency department using simple methods. The ideal method should be simple, easy, quick, effective, atraumatic, pain-free, require little assistance or medication, and cause no additional injury to the shoulder joint, musculoskeletal or neurovascular structures [37,38]. Till date there is no standard procedure for reduction of shoulder dislocation. Numerous

methods and procedures have been described [14-18,31-35] and most of these require a general anaesthesia, muscle relaxation, pre medication or sedatives. Success rates for the various described procedures varies between 70-90% regardless of technique [38]. Literature states that more than one method may be needed in some cases, while 5-10% of cases cannot be reduced in the Emergency Room [39]. It is often wrongly mentioned that traction is the first and most important step of reduction. Shoulder dislocations are primarily rotation/lateral shift injuries, and there is no role or traction, push, pull, counter traction, tapes or heel in the axilla, in their reduction [40].

It is often erroneously stated that some shoulders are tricky and the practitioner must be familiar with more than one method so that if one fails, the other can be deployed [38]. All methods deploy traction in some form or the other, and this is combined with rotations, translations, scapular movements, counter tractions, direct pushing in of the head, etc. [40,41] The methods described include traction-counter-traction in adduction (Hippocrates) [1], in forward flexion (Stimson and Spaso), in lateral elevation (Eskimos), with leverage (Kocher and Milch), scapular manipulation, and other methods using direct pressure or pushes. The existence of plethora of methods spells the fact that not one method is fool proof or guaranteed to work all the time. Other methods are fist in axilla [41], direct knee pressure [2,3] sheets or straps to pull out the axilla [4] pulling the arm over the back of a chair [5,6] Simpson's hanging arm method [8,9,37-39] reverse Spaso [10-13] painful self reduction method of Boss-Holzach [14] Milch and its variants [16-24,42-45] Leidelmeier's external rotation method [46,47] Scapular manipulations [48-50] and other miscellaneous methods [51]. Many of these methods have been called easy, revolutionary, new or simple by their inventors and proponents [4-10,14-18]. However the success with all these procedures and methods varies tremendously and the success rate has been variously reported from 60% (auto reduction) to 97% (Milch) [26].

The below Table 1 modified from CH Chung's [26] publication, lists the success rate of various procedures. This method is different from the others hitherto published, because the exact combination of movements to be performed in an erect position, without any traction, anaesthesia or analgesia, leading to a hundred percent successful reduction, has not been previously described. Not a day passes without emails, messages, phone calls, or texts, praising this method [52-54].

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