Scapulothoracic mobility and strengthening after a posterior capsular reconstruction of the glenohumeral joint with an allograft: A case report

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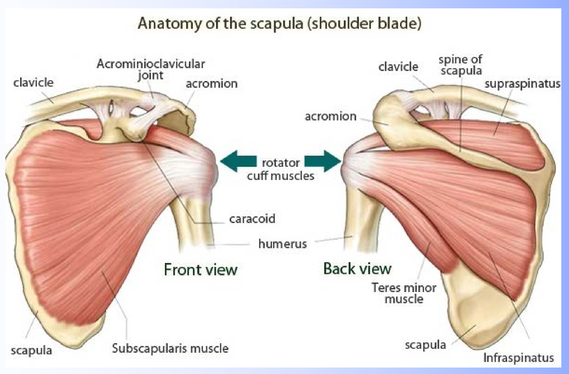
PURPOSE:

About 250,000 rotator cuff repairs are performed in the United States every year[1]. About 10% to 40% of all rotator cuff tears include more than one rotator cuff muscle[2], and failure rates for massive rotator cuff repairs are higher than those for smaller tears[3].

The purpose of this case report is to emphasize the importance of scapular mobility and strengthening exercises in rehabilitation protocols for patients after a posterior capsular reconstruction surgery of the glenohumeral joint.



CASE DESCRIPTION:

Body Function and Structure

Decreased shoulder range of motion
Muscle weakness
Poor posture

Activity Limitations

Reaching into cabinets
Washing his back
Tucking shirt into jeans

Participation Restrictions

Cannot work
Cannot play basketball with his son

Environmental Factors

Lawyers for workers compensation case
Lives alone

Personal Factors

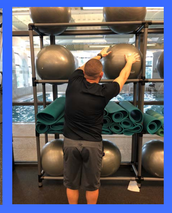
Male
48 years old
High blood pressure
Smoking

METHODS:

Week 1:
PNF stretching of internal and external rotators
Scapular retraction in standing
Flexion with scapular assistance


Week 2:
Shoulder abduction with scapular assistance
Prone rows with dumbbell
Supine ceiling punches


Week 3:
Quadruped weight shifting
Standing reaching activity

RESULTS:

Outcome measure		Initial evaluation	Treatment session 9
Active/passive range of motion	Shoulder flexion	105/140	123/150
	Shoulder extension	55/64	62/66
	Shoulder abduction	105/130	115/130
	Shoulder internal rotation	65/70	65/77
	Shoulder external rotation	50/70	81/89
Muscle strength	Middle deltoid	3-/5	4-/5
	Anterior deltoid	3-/5	4-/5
	Shoulder external rotators-group	3-/5	4/5
	Shoulder internal rotators-group	3+/5	4/5
	Rhomboids and serratus anterior	3/5	4-/5
Numeric pain rating scale	Best	6/10	4/10
	Worst	10/10	7/10
Quick DASH		81.82%	59.09%

CONCLUSION:

The objective outcomes by week three are displayed in Table 1.0. The patient was discharged after nine visits over a period of three weeks. During the final session, the patient was able to perform standing shoulder abduction to 90 degrees with a one-pound dumbbell pain-free. The patient was able to reach into a shelf at 120 degrees of shoulder flexion with a pain scale rating of 2/10. He was unable to return to work or play basketball with his son, but he was able to reach his kitchen cabinets at home if he stood on a small step. The patient's Quick DASH score improved to 59.09% disability.

CLINICAL APPLICATION:

Since there is not an evidence-based protocol for the posterior capsular reconstruction at this time, identifying important elements like scapular control and mobility should help guide physical therapists' interventions. Physical therapy's focus should not be on scapular position but applying external loads to focus on a muscle-based functional approach compared to a scapula-based movement approach[4].

REFERENCES:

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