

15.

BÖLÜM

SUBSKAPULARİS TENDON YIRTIKLARI

Cihan UÇAR¹

GİRİŞ

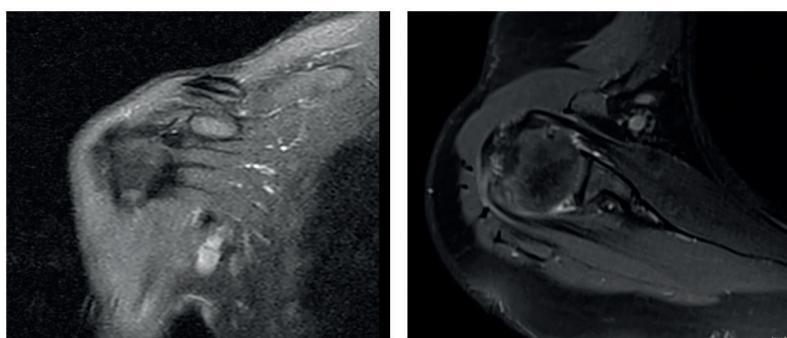
Subskapularis kası glenohumeral eklemin stabilatörü ve rotator manşetin en kuvvetli ve en büyük kasıdır (1-3). Omuzun ekstansiyon, dış rotasyon ve abduksiyon hareketlerine karşı ters kasılma ile omuz stabilitesine önemli katkı sağlar(2,4). İnfraspinatus ve teres minör kaslarının hareketlerine tek başına karşı koyar(5). Yapılan çalışmalar ve manyetik rezonans görüntülerinde görüldüğü üzere skapulanın ön yüzünde bulunan subskapular fossadan başlayan lifler birleşerek humerusun tuberkulum minusuna yapışır(Şekil 1). Tüberkülüm minustaki yapışma alanı ortalama 40x20mm kadardır(6). Tüm rotator manşet kasları arasında yapışma alanı en geniş olanıdır(7).

Subskapularis tendonunu superiordan korakohumarel ligament ve superior glenohumeral ligament sarar ve fonksiyonuna yardımcı olur;

dolayısıyla subskapularis yırtıklarında superior glenohumeral ligament de etkilenir(8).

Subskapular kası subskapular sinir superior ve inferior dalları ile innerve eder. Superior dalı genellikle arka korddan çıkar. Inferior dal ise bazen arka korddan, aksiller sinirden veya torakodorsal sinirden çıkarken bazen de bu sinirlerin dallarının birleşmesiyle oluşur(9).

Subskapular kas kolun adduksiyon ve iç rotasyonunda primer görevli iken kasın superior lifleri abduksiyonun ileri derecelerinde humerus başını glenoid merkezinde tutarak kolun abduksiyonuna da yardımcı olurlar(10). Subskapular kas humerus başının glenoide santralizasyonunu sağladığı için yırtıklarında anterior instabilite oluşur. Nevasier ve ark. subskapularis yırtığı olan hastalarda tekrarlayan anterior instabiliteyi işlemişlerdir(11).



Şekil 1. Solda koronal kesitte 3 adet subskapularis kas tendonu ve sağda bütün halinde subskapularis kası tuberculum minus'a yapışmaktadır.

¹ Uzm. Dr. Trabzon Yavuz Selim Kemik Hastalıkları ve Rehabilitasyon Hastanesi Ortopedi ve Travmatoloji Kliniği, dr_cucar@hotmail.com

KAYNAKÇA

1. Saha AK. Dynamic stability of the glenohumeral joint. *Acta orthopaedica Scandinavica*. 1971;42 (6): 491-505
2. Turkel SJ, Panio MW, Marshall JL, Gergis FG. Stabilizing mechanisms preventing anterior dislocation of the glenohumeral joint. *The Journal of bone and joint surgery American volume*. 1981; 63 (8): 1208-17
3. Symeonides PP. The significance of the subscapularis muscle in the pathogenesis of recurrent anterior dislocation of the shoulder. *The Journal of bone and joint surgery British volume*. 1972; 54 (3) 476-83
4. Frankel MA, Cofield RH. Rotator cuff tears including the subscapularis. Fifth International Conference of Surgery of the Shoulder; Paris: France 1992: 52
5. Thompson WO, Debbski RE, Boardman ND, 3rd, Taskiran E, Warner JJ, Fu FH, et al. A biomechanical analysis of rotator cuff deficiency in a cadaveric model. *The American journal of sports medicine*. 1996;24 (3): 286-92
6. De Vita A, Costantini A, Minagawa H. Glenohumeral Joint. In :Giocomo GD, Pouliart N, Costantini A, Vita AD, editors. *Atlas of Functional Shoulder Anatomy*. Milan : Springer; 2008. P. 61-108
7. Dugas JR, Campbell DA, Warren RF, Robie BH, Millett PJ. Anatomy and dimensions of rotator cuff insertions. *J Shoulder Elbow Surgery* 2002; (11): 498-503
8. Arai R, Mochizuki T, Yamaguchi K, Sugaya H, Kobayashi M, Nakamura T, et al. Functional anatomy of the superior glenohumeral and coracohumeral ligaments and the subscapularis tendon in view of stabilization of the long head of the biceps tendon. *Journal of shoulder and elbow surgery/ American Shoulder and Elbow Surgeons* . 2010; 19(1): 58-64
9. Kato K. Innervation of the scapular muscles and its morphological significance in man. *Anatomischer Anzeiger*. 1989;168 (2): 155-68
10. Halder A, Zobitz ME, Schultz E, An KN. Structural properties of the subscapularis tendon. *Journal of orthopaedic research: official publication of the Orthopaedic Research Society*.2000; 18(5): 829-34
11. Neviaser RJ, Neviaser TJ, Neviaser JS. Concurrent rupture of the rotator cuff and anterior dislocation of the shoulder in the older patient. *J Bone Joint Surgery Am* 1988; 70:1308-11
12. Werner CM, Favre P, Gerber C. The role of the subscapularis in preventing anterior glenohumeral subluxation in the abducted, externally rotated position of the arm. *Clinical biomechanics*. 2007;22 (5): 495-501
13. Gerber C, Krushell RJ. Isolated rupture of the tendon of the subscapularis muscle. Clinical features in 16 cases. *J Bone Joint Surgery Bristish*. 1991; 73: 389-94
14. Meyer AW. Chronic Functional Lesions of shoulder. *Arch Surgery*. 1937;35: 646-74
15. Gumina S, Postacchini F, Orsina L, Cinotti G. The morphometry of the coracoid process-its aetiological role in subcoracoid impingement syndrome. *International orthopaedics*. 1999;23 (4): 198-201
16. Osti L, Soldati F, Del Buono A, Massari L. Subcoracoid impingement and subscapularis tendon:is there any tryth? *Muscles , ligaments and tendons journal*. 2013;3(2):101-5
17. Codman E. *Rupture of the supraspinatus tendon and other lesions in or about the subacromial bursa. The shoulder*. Boston , MA: Thomas Tod Co;1934
18. Park JY, Lee SH, Oh KS, Kim NR, Hwang JT. Is arthroscopic coracoplasty necessary in subcoracoid impingement syndrome? *Arthroscopy: the journal of arthroscopic related surgery:official publication of the Arthroscopy Association of North America and the International Arthroscopy Association*.2012;28 (12):1766-75
19. Lafosse L, Jost B, Reiland Y, Audebert S, Toussaint B, Gobezie R. Structural integrity and clinical outcomes after arthroscopic repair of isolated subscapularis tears. *The Journal of bone and joint surgery American volume*. 2007;89 (6): 1184-93
20. Ticker JB, Warner JJ. Single -tendon tears of the rotator cuff. Evaluation and treatment of subscapularis tears and principles of treatment for supraspinatus tears. *Orthop Clin Norrh America* 1997;28:99-116
21. Adams CR, Schofield JD, Burkhart SS. The results of arthroscopic subscapularis tendon repairs. *Arthroscopy* 2008;24:1381-9
22. Bennett WF. Subscapularis, medial and lateral head coracohumeral ligament insertion anatomy. *Arthroscopic appearance and incidence of "hidden" rotator interval lesions*. *Arthroscopy* 2001;17:173-80
23. Buess E, Steuber KU, Waibl B. Open versus arthroscopic rotator cuff repair: a comparative view of 96 cases. *Arthroscopy* 2005;21:597-604
24. Burkhart SS, Brady PC. Arthroscopic subscapularis repair: surgical tips and pearls A to Z. *Arthroscopy: the journal of arthroscopic related surgery: official publication of the Arthroscopy Association of North America and the International Arthroscopy Association*.2006;22 (9): 1014-27
25. Lo IK, Burkhart SS. The comma sign: An arthroscopic guide to the torn subscapularis tendon. *Arthroscopy: the journal of arthroscopic related surgery: offical publication of the Arthroscopy Association of North America and the International Arthroscopy Association*. 2003;19 (3):334-7.
26. Edwards TB, Walch G, Sirveaux F, Mole D, Nove-Josserand L, Boulahia A. Repair of tears of the subscapularis. *Surgical technique*. *J Bone Joint Surgery* 2006;88