



## BÖLÜM 22

### OMUZ LAKSİTESİ (INSTABİLİTESİ)

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#### GİRİŞ

Omuz eklemi sferoid yapıda bir eklemdir ve doğası gereği instabildir. Humerus başı eklem yüzeyinin yaklaşık 1/3'ü kadardır ve humerus başının olağanüstü hareketliliğine izin verecek şekilde son derece sağlamdır. Bu yüzden statik ve dinamik stabilizatörler eklem stabilitesi sağlar. Statik stabilizatörler; glenoid, labrum, eklem uyumu, glenohumeral bağlar, kapsül ve eklem içi negatif basınç şeklindedir. Dinamik stabilizatörler; rotator manşet kasları/tendonları, biceps tendonu, skapular stabilizatörler (periskapular kaslar), propriosepsiyon duyu-su şeklindedir. Glenoidin sağ şekilde minimum kemik stabilitesi sağlanır, ancak fibrokartilajinöz yapıdaki labrum tarafından glenoid derinleştirilir ve stabilize edilir. Labrum, humerus subluksasyonu için bir tampon/durdurma görevi görür ve ayrıca kapsüligamentöz yapılar için bağlanma yeri işlevi görür. Rotator manşet tendonları proksimal humerus üzerine birleşik “at nali” şeklinde yerlesir. Bu kaslar tüm hareketler sırasında humerus başını aktif olarak glenoid içinde tutar (1). Eklem kapsülü eklem içi negatif basınç oluşturur ancak posteriorında ince yapıdadır. Glenohumeral ligamentler ekleme stabilité sağlayan anterior ve inferior kapsülün farklı kalınlıklarıyla oluşur. Posteriorda ve superiorda bağ yapıları yoktur.

#### ANATOMİ

Glenohumeral bağlar; superior glenohumeral ligament (SGHL), orta glenohumeral ligament (OGHL), inferior glenohumeral ligament (İGHL) ve korakohumeral ligament (KHL) şeklindedir.

##### Superior Glenohumeral Ligament

Anterosuperior glenoid kenar/labrum ile proksimal tüberkülüm minus arasında uzanır. Fonksiyonu: omuz adduksiyonunda inferiöra translasiyona ve dış rotasyona direnç göstermektir. Ayrıca 90° ileri fleksiyonda posterior translasiyona direnç gösterir (1). Bu ligament posterior ve inferior subluksasyona direnç gösterir (2).

##### Orta Glenohumeral Ligament

Anterosuperior glenoid kenar/labrum ile (SGHL'den daha aşağıda) tüberkülüm minus mediali arasında uzanır. Fonksiyonu: 45° abdükisyonda anteroposterior translasiyona direnç göstermektir. Adduksiyonda ve dış rotasyona direnç gösterir (3). Buford kompleksi, OGHL'nin kalınlaşması ile anterior/superior labrumun yokluğuyla karakterizedir.

##### Inferior Glenohumeral Ligament

Anterior ve posterior bant olmak üzere 2 kısımdan oluşur. Posterior bant önem teşkil etmekte-

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## KAYNAKLAR

1. Thompson JC. Netter's Concise Orthopaedic Anatomy. O'Grady E, editor: Elsevier; 2010.
2. Burkart AC, Debski RE. Anatomy and function of the glenohumeral ligaments in anterior shoulder instability. Clinical Orthopaedics and Related Research®. 2002;400:32-9.
3. Beltran J, Bencardino J, Padron M, Shankman S, Beltran L, Ozkarahan G. The middle glenohumeral ligament: normal anatomy, variants and pathology. Skeletal radiology. 2002;31(5):253-62.
4. Farrar NG, Malal JJG, Fischer J, Waseem M. Suppl 3: An Overview of Shoulder Instability and its Management. The Open Orthopaedics Journal. 2013;7:338.
5. Omoumi P. Advanced imaging of glenohumeral instability: it may be less complicated than it seems. Journal of the Belgian Society of Radiology. 2016;100(1).
6. Netter FH. Atlas of Human Anatomy. 7 ed: Elsevier.
7. Cameron KL, Mauntel TC, Owens BD. The epidemiology of glenohumeral joint instability: incidence, burden, and long-term consequences. Sports Medicine and Arthroscopy Review. 2017;25(3):144-9.
8. Brotzman SB. Brotzman Klinik Ortopedik Rehabilitasyon: Hipokrat; 2019.
9. Yamamoto N, Shinagawa K, Hatta T, Itoi E. Peripheral-Track and Central-Track Hill-Sachs Lesions: A New Concept of Assessing an On-Track Lesion. Am J Sports Med. 2020;48(1):33-8.
10. Varacallo M, Tapscott DC, Mair SD. Superior Labrum Anterior Posterior Lesions. StatPearls. Treasure Island (FL): StatPearls Publishing
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11. Sherman SC, Schaider J. Shoulder dislocation and reduction. UpToDate, Waltham, MA. 2010.
12. Brady WJ, Knuth CJ, Pirrallo RG. Bilateral inferior glenohumeral dislocation: luxatio erecta, an unusual presentation of a rare disorder. The Journal of emergency medicine. 1995;13(1):37-42.
13. Zacchilli MA, Owens BD. Epidemiology of shoulder dislocations presenting to emergency departments in the United States. JBJS. 2010;92(3):542-9.
14. Dumont GD, Russell RD, Robertson WJ. Anterior shoulder instability: a review of pathoanatomy, diagnosis and treatment. Current reviews in musculoskeletal medicine. 2011;4(4):200-7.
15. Ladd LM, Crews M, Maertz NA. Glenohumeral Joint Instability: A Review of Anatomy, Clinical Presentation, and Imaging. Clinics in Sports Medicine. 2021;40(4):585-99.
16. Arora SP, Naqvi WM. Inferior glenohumeral dislocation in an elderly. Pan Afr Med J. 2022;41:277.
17. Carbone S, Papalia M, Arceri V, Placidi S, Carbone A, Mezzoprete R. Humeral head inferior subluxation in proximal humerus fractures. Int Orthop. 2018;42(4):901-7.
18. Idowu BM, Ayoola OO, Adetilooye VA, Komolafe MA, Afolabi BI. Sonographic detection of inferior subluxation in post-stroke hemiplegic shoulders. J Ultrason. 2017;17(69):106-12.
19. Harper KW, Helms CA, Haystead CM, Higgins LD. Glenoid dysplasia: incidence and association with posterior labral tears as evaluated on MRI. American Journal of Roentgenology. 2005;184(3):984-8.
20. Milano G, Grasso A, Russo A, Magarelli N, Santagada DA, Deriu L, et al. Analysis of risk factors for glenoid bone defect in anterior shoulder instability. The American journal of sports medicine. 2011;39(9):1870-6.
21. Thangarajah T, Lambert SM. Management of recurrent shoulder instability in patients with epilepsy. Journal of Shoulder and Elbow Surgery. 2016;25(8):1376-84.
22. Mehmet Beyazova YGK. Fiziksel Tip ve Rehabilitasyon. Ankara Güneş tip kitabevi; 2016. 286 p.
23. Provencher MT, Frank RM, LeClere LE, Metzger PD, Ryu J, Bernhardson A, et al. The Hill-Sachs lesion: diagnosis, classification, and management. JAAOS-Journal of the American Academy of Orthopaedic Surgeons. 2012;20(4):242-52.
24. Hegedus EJ, Goode AP, Cook CE, Michener L, Myer CA, Myer DM, et al. Which physical examination tests provide clinicians with the most value when examining the shoulder? Update of a systematic review with meta-analysis of individual tests. British journal of sports medicine. 2012;46(14):964-78.
25. Nakagawa S, Yoneda M, Hayashida K, Obata M, Fukushima S, Miyazaki Y. Forced shoulder abduction and elbow flexion test: a new simple clinical test to detect superior labral injury in the throwing shoulder. Arthroscopy: The Journal of Arthroscopic & Related Surgery. 2005;21(11):1290-5.
26. Magee DJ. Orthopedic physical assessment. St. Louis, Mo: Saunders Elsevier. 2008.
27. Kolber MJ, Carrao M. The interrater reliability of the load and shift test for anterior shoulder instability: A technical report. Internet Journal of Allied Health Sciences and Practice. 2010;8(2):10.
28. van Kampen DA, van den Berg T, van der Woude HJ, Castelein RM, Terwee CB, Willems WJ. Diagnostic value of patient characteristics, history, and six clinical tests for traumatic anterior shoulder instability. J Shoulder Elbow Surg. 2013;22(10):1310-9.
29. Blasier RB, Soslowsky LJ, Malicky DM, Palmer ML. Posterior glenohumeral subluxation: active and passive stabilization in a biomechanical model. JBJS. 1997;79(3):433-40.
30. Kim S-H, Park J-C, Park J-S, Oh I. Painful jerk test: a predictor of success in nonoperative treatment of posteroinferior instability of the shoulder. The American journal of sports medicine. 2004;32(8):1849-55.
31. Morey V, Singh H, Paladini P, Merolla G, Phadke V, Porcellini G. The Porcellini test: a novel test for accurate diagnosis of posterior labral tears of the shoulder: comparative analysis with the established tests. Musculoskeletal surgery. 2016;100(3):199-205.
32. Morey VM, Singh H, Paladini P, Merolla G, Phadke V, Porcellini G. The Porcellini test: a novel test for accurate diagnosis of posterior labral tears of the shoulder: comparative analysis with the established tests. Musculoskeletal Surg. 2016;100(3):199-205.

33. Amini B, Beckmann NM, Beaman FD, Wessell DE, Bernard SA, Cassidy RC, et al. ACR Appropriateness Criteria® Shoulder Pain—Traumatic. *Journal of the American College of Radiology*. 2018;15(5):S171-S88.
34. Small KM, Adler RS, Shah SH, Roberts CC, Bencardino JT, Appel M, et al. ACR Appropriateness Criteria® shoulder pain—atraumatic. *Journal of the American College of Radiology*. 2018;15(11):S388-S402.
35. Rozing PM, de Bakker HM, Obermann WR. Radiographic views in recurrent anterior shoulder dislocation: comparison of six methods for identification of typical lesions. *Acta Orthopaedica Scandinavica*. 1986;57(4):328-30.
36. Bencardino JT, Gyftopoulos S, Palmer WE. Imaging in anterior glenohumeral instability. *Radiology*. 2013;269(2):323-37.
37. Liu F, Cheng X, Dong J, Zhou D, Sun Q, Bai X, et al. Imaging modality for measuring the presence and extent of the labral lesions of the shoulder: a systematic review and meta-analysis. *BMC musculoskeletal Disorders*. 2019;20(1):1-14.
38. Schreinemachers SA, van der Hulst VP, Jaap Willems W, Bipat S, van der Woude H-J. Is a single direct MR arthrography series in ABER position as accurate in detecting anteroinferior labroligamentous lesions as conventional MR arthrography? *Skeletal radiology*. 2009;38(7):675-83.
39. Tian C-Y, Cui G-Q, Zheng Z-Z, Ren A-H. The added value of ABER position for the detection and classification of anteroinferior labroligamentous lesions in MR arthrography of the shoulder. *European journal of radiology*. 2013;82(4):651-7.
40. Brandão BL, Brown E, Motta G, Monteiro M, Marchiori E. Recurrent anterior glenohumeral instability: the quantification of glenoid bone loss using magnetic resonance imaging. *Skeletal radiology*. 2014;43(8):1085-92.
41. Gyftopoulos S, Hasan S, Bencardino J, Mayo J, Nayyar S, Babb J, et al. Diagnostic accuracy of MRI in the measurement of glenoid bone loss. *American Journal of Roentgenology*. 2012;199(4):873-8.