

8.

Bölüm

SİNDESMOZ YARALANMALARI

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GİRİŞ

Sindesmoz yaralanmaları ayak bileğinin hemen üzerinde distal tibia ile fibulayı birbirine bağlayan ligamentöz yapıların yaralanmasını ifade eder. Bu yaralanmalara deltoid ligaman yaralanmaları eşlik edebilir. Bu yaralanmalar yüksek enerjili ayak bileği yaralanmalarında, temas sporları sırasında veya kırıklara eşlik eden yaralanmalar olarak görülebilir. Ayak bileğinin ligamentöz yaralanmaları içerisinde %1 ile %18 arasındaki oranlarda görülebildiği bildirilmiştir (1, 2). Sindesmoz yaralanmaları tanı konulamaması durumunda ayak bileğinde kronik instabiliteye ve bunun sonucunda dejeneratif artritik değişikliklerin gelişmesine neden olabilir. Diğer yandan bu yaralanmaların gelişme mekanizması, tanı konulması ve uygun tedavi yönteminin seçilebilmesi konularında tartışmalar devam etmektedir.

ANATOMİ

Sindesmoz eklem anterior inferior tibiofibuler ligaman (AITFL), posterior inferior tibiofibuler ligaman (PITFL), interosseöz ligaman (IOL) ve inferior transvers tibiofibuler ligaman (ITFL) tarafından çevrelenen fibröz yapıda, hıyalin kıkırdak içeren bir eklemdir (3). ITFL bazı yazarlar tarafından PITFL'nin bir parçası olarak kabul edilir (4). Eklem içerisinde fibula konveks, tibia ise konkav yapıdadır. Tibial incisuranın anterior tüberkülu posterior tüberkülüne kıyasla daha genişdir. Bu sayede fibulanın anteriora translasyonu kısıtlanır (5).

AITFL fibulanın aşırı eksternal rotasyonunu kısıtlayıcı AITFL genellikle IOL

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KAYNAKLAR

- Boytim MJ, Fischer DA, Neumann L. *Syndesmotic ankle sprains*. Am J Sports Med, 1991. **19**(3): p. 294-8.
- Fallat, L., D.J. Grimm, and J.A. Saracco, *Sprained ankle syndrome: prevalence and analysis of 639 acute injuries*. J Foot Ankle Surg, 1998. **37**(4): p. 280-5.
- Hermans, J.J., et al., *Anatomy of the distal tibiofibular syndesmosis in adults: a pictorial essay with a multimodality approach*. J Anat, 2010. **217**(6): p. 633-45.
- Miller, C.D., et al., *Deltoid and syndesmosis ligament injury of the ankle without fracture*. Am J Sports Med, 1995. **23**(6): p. 746-50.
- Hunt, K.J., *Syndesmosis injuries*. Curr Rev Musculoskelet Med, 2013. **6**(4): p. 304-12.
- Lin, C.F., M.L. Gross, and P. Weinholt, *Ankle syndesmosis injuries: anatomy, biomechanics, mechanism of injury, and clinical guidelines for diagnosis and intervention*. J Orthop Sports Phys Ther, 2006. **36**(6): p. 372-84.
- de-Las-Heras Romero, J., et al., *Management of syndesmotic injuries of the ankle*. EFORT Open Rev, 2017. **2**(9): p. 403-409.
- Fritschy, D., *An unusual ankle injury in top skiers*. Am J Sports Med, 1989. **17**(2): p. 282-5; discussion 285-6.
- Guise, E.R., *Rotational ligamentous injuries to the ankle in football*. Am J Sports Med, 1976. **4**(1): p. 1-6.
- Smith, A.H. and B.R. Bach, *High ankle sprains: minimizing the frustration of a prolonged recovery*. Phys Sportsmed, 2004. **32**(12): p. 39-43.
- Harper, M.C. and T.S. Keller, *A radiographic evaluation of the tibiofibular syndesmosis*. Foot Ankle, 1989. **10**(3): p. 156-60.
- Kennedy, J.G., et al., *Evaluation of the syndesmotic screw in low Weber C ankle fractures*. J Orthop Trauma, 2000. **14**(5): p. 359-66.
- Beumer, A., et al., *Radiographic measurement of the distal tibiofibular syndesmosis has limited use*. Clin Orthop Relat Res, 2004(423): p. 227-34.
- Press, C.M., A. Gupta, and M.R. Hutchinson, *Management of ankle syndesmosis injuries in the athlete*. Curr Sports Med Rep, 2009. **8**(5): p. 228-33.
- Thormeyer, J.R., *Syndesmotic Injuries in Athletes*. 2012, s.l.: IntechOpen.
- Gardner, M.J., et al., *Malreduction of the tibiofibular syndesmosis in ankle fractures*. Foot Ankle Int, 2006. **27**(10): p. 788-92.
- Kim, S., et al., *Chronic tibiofibular syndesmosis injury of ankle: evaluation with contrast-enhanced fat-suppressed 3D fast spoiled gradient-recalled acquisition in the steady state MR imaging*. Radiology, 2007. **242**(1): p. 225-35.
- van Dijk, C.N., et al., *Classification and diagnosis of acute isolated syndesmotic injuries: ESSKA-AFAS consensus and guidelines*. Knee Surg Sports Traumatol Arthrosc, 2016. **24**(4): p. 1200-16.
- Nussbaum, E.D., et al., *Prospective evaluation of syndesmotic ankle sprains without diastasis*. Am J Sports Med, 2001. **29**(1): p. 31-5.
- Amendola, A., G. Williams, and D. Foster, *Evidence-based approach to treatment of acute traumatic syndesmosis (high ankle) sprains*. Sports Med Arthrosc Rev, 2006. **14**(4): p. 232-6.
- Naqvi, G.A., et al., *Fixation of ankle syndesmotic injuries: comparison of tightrope fixation and syndesmotic screw fixation for accuracy of syndesmotic reduction*. Am J Sports Med, 2012. **40**(12): p. 2828-35.
- Weening, B. and M. Bhandari, *Predictors of functional outcome following transsyndes-*

- motic screw fixation of ankle fractures.* J Orthop Trauma, 2005. **19**(2): p. 102-8.
- 23. Hovis, W.D., et al., *Treatment of syndesmotic disruptions of the ankle with bioabsorbable screw fixation.* J Bone Joint Surg Am, 2002. **84**(1): p. 26-31.
 - 24. Mak, M.F., R. Stern, and M. Assal, *Repair of syndesmosis injury in ankle fractures: Current state of the art.* EFORT Open Rev, 2018. **3**(1): p. 24-29.
 - 25. Gardner, M.J., et al., *Fixation of posterior malleolar fractures provides greater syndesmotic stability.* Clin Orthop Relat Res, 2006. **447**: p. 165-71.
 - 26. Thompson, M.C. and D.S. Gesink, *Biomechanical comparison of syndesmosis fixation with 3.5- and 4.5-millimeter stainless steel screws.* Foot Ankle Int, 2000. **21**(9): p. 736-41.
 - 27. Wikerřy, A.K., et al., *No difference in functional and radiographic results 8.4 years after quadricortical compared with tricortical syndesmosis fixation in ankle fractures.* J Orthop Trauma, 2010. **24**(1): p. 17-23.
 - 28. Bragonzoni, L., et al., *The distal tibiofibular syndesmosis during passive foot flexion. RSA-based study on intact, ligament injured and screw fixed cadaver specimens.* Arch Orthop Trauma Surg, 2006. **126**(5): p. 304-8.
 - 29. McBryde, A., et al., *Syndesmotic screw placement: a biomechanical analysis.* Foot Ankle Int, 1997. **18**(5): p. 262-6.
 - 30. Walley, K.C., et al., *Removal of Hardware After Syndesmotic Screw Fixation: A Systematic Literature Review.* Foot Ankle Spec, 2017. **10**(3): p. 252-257.
 - 31. Schepers, T., *To retain or remove the syndesmotic screw: a review of literature.* Arch Orthop Trauma Surg, 2011. **131**(7): p. 879-83.
 - 32. Cottom, J.M., et al., *Treatment of syndesmotic disruptions with the Arthrex Tightrope: a report of 25 cases.* Foot Ankle Int, 2008. **29**(8): p. 773-80.
 - 33. Forsythe, K., et al., *Comparison of a novel FiberWire-button construct versus metallic screw fixation in a syndesmotic injury model.* Foot Ankle Int, 2008. **29**(1): p. 49-54.
 - 34. Storey, P., et al., *Complications of suture button ankle syndesmosis stabilization with modifications of surgical technique.* Foot Ankle Int, 2012. **33**(9): p. 717-21.
 - 35. van den Bekerom, M.P., P.A. de Leeuw, and C.N. van Dijk, *Delayed operative treatment of syndesmotic instability. Current concepts review.* Injury, 2009. **40**(11): p. 1137-42.