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ÖNSÖZ

Değerli meslektaşlarım,

Dünyadaki en büyük mutluluk öğrenmek ve bilmektir, bilgi güçtür. Herkesin doğru ve yararlı bilgiye ulaşabilmesi ve bilgeliğe varması dileğimizdir. Hekimlik bir sanattır. Fiziksel hastalıkları yönetmek de bu sanatın en matematiksel kısmıdır. Matematik hayatımızın her alanında vardır. İnceliklerini bilince hayatımız kolaylaşır. Fiziksel Tıp ve Rehabilitasyon alanında hareketi kısıtlayarak yaşam kalitesini düşüren, toplumda büyük bir ekonomik yük yaratan, bazen de sosyal izolasyona neden olabilen diz ağrılarını; her yönüyle, güncel literatür eşliğinde ele almak istedik. Diz ağrılarının da inceliklerini bilirsek yaşam kalitemizi ve fiziksel fonksiyonumuz artırabiliriz.

En son literatürleri tarayarak büyük bir özenle ve emekle hazırladığımız 'Diz ağrıları' kitabımızın Fiziksel Tıp ve Rehabilitasyon Uzmanları yanı sıra, tüm hekim arkadaşlarımız için başucu kitabı olacağını düşünüyoruz.

Bu güzel çalışmamızın devamını, sabırsızlıkla planlıyoruz. Kitabımızın okuyan tüm hekim arkadaşlarımızın çalışma hayatına kolaylıklar katmasını dileriz.

Öncelikle kitapta emeği geçen tüm hekim arkadaşlarıma, özverili çalışmaları için teşekkür ediyorum. Özellikle de klinikte birlikte çalıştığımız, işyerindeki ailem; Fatma Gül Ülkü Demir ve Ayşe Güç'e samimi çalışmaları için ayrıca teşekkür ediyorum.

Çalışmamızın her aşamasında yanımızda olarak, büyük bir titizlikle destekleyen başta Yayın Koordinatörümüz Yasin Dilmen Bey olmak üzere, Akademisyen Yayınevi tüm çalışanlarına teşekkür ederim.

Ayrıca hekim olmamı sağlayan annem Fatma Talay ve rahmetli babam Hasan Talay'a, bu sanatı yaparken uzun ve zahmetli çalışma saatlerime katlanan, mesleğimde de her zaman destekçim olan çok sevgili eşim Mustafa Çalış'a ve canım çocuklarım Ertuğrul, Mehmet Selçuk ve Rüya Selen'e teşekkür ederim.

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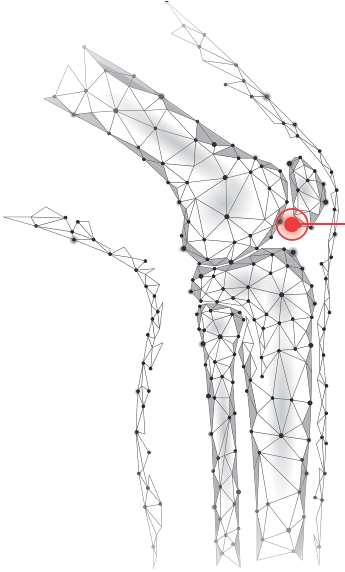

BÖLÜM 1

DİZ ANATOMİSİ VE BİYOMEKANİĞİ

Sinem Kübra KONCA[1]
İsa CÜCE[2]

GİRİŞ

Diz, toplumda kas-iskelet sistemi ağrılarının en sık görüldüğü anatomik bölgelerden biridir ve genel olarak, yaş ilerledikçe hem diz ağrısı hem de diz ağrısı ile ilişkili fiziksel sakatlık prevalansı artar (1). Diz ağrısı ile başvuran bir hastada; kapsamlı bir öykü, tam bir fizik muayene ve uygun tanısal görüntüleme araçları (gerekli durumlarda) dâhil sistematik bir değerlendirme yaklaşımı gereklidir. Bu değerlendirme sonucu hastalara doğru tanı koymak ve uygun bir tedavi stratejisi belirlemek için diz anatomisinin ve temel biyomekaniğinin anlaşılması esastır (2). Bu bölümde, kas-iskelet sistemi bozukluklarına bağlı diz ağrılarının başarılı bir şekilde yönetimi için dizin klinik anatomisi ve biyomekaniği gözden geçirilecektir.

DİZ

Diz eklem yüzeyi ve eklem hacmi açısından vücuttaki en büyük eklemdir ve sanılanın aksine biyomekaniği oldukça karmaşıktır. Eklemi oluşturan kemik yapılar distal femur, proksimal tibia ve patelladır. Fibula diz eklemine katılmaz. Diz eklemi, esasında tibiofemoral ve patellofemoral eklem olmak üzere iki ayrı fakat

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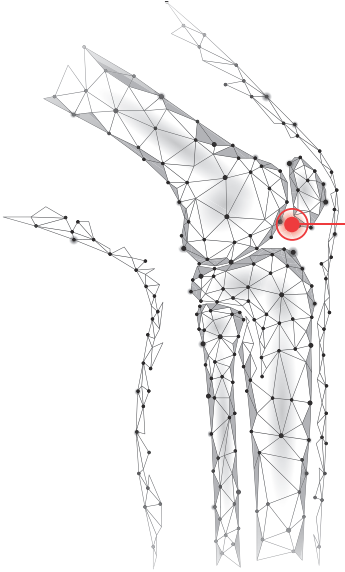

BÖLÜM 2

DİZ MUAYENESİ

Firdevs AKDENİZ ÇINAR[1]
Fatma Gül ÜLKÜ DEMİR[2]

GİRİŞ

İnsan vücudundaki en büyük eklem diz eklemidir. Diz eklemi tibia, fibula, patella ve femuru içerir. Bu yapılar ortak bir sinovyal boşluğu paylaşan medial tibiofemoral, lateral tibiofemoral ve patellofemoral olmak üzere üç bölümden oluşur (1, 2).

Femur ve tibia arasındaki kıkırdak yüzeyler, kıkırdak yapıya sahip menisküsler ile korunur ve desteklenir. Menisküsler eklem yüzeyinde yükün dengeli dağılmasını sağlar, gelen darbeleri soğurur, eklemin stabilitesine yardımcı olur (2, 3).

Kemik yapılar, kapsül, menisküs ve bağlar diz ekleminde statik stabiliteyi sağlarken, kas ve tendonlar da dinamik stabiliteden sorumludur. (1-3).

Diz stabilitesine katkıda bulunan ana yapılar bağlardır. Diz ekleminin medial ve lateral bölgesi; medial kollateral ligaman (MKL) ve lateral kollateral ligaman (LKL) ile desteklenir. Merkezde ise ön çapraz bağ ile arka çapraz bağ bulunur. Kollateral bağlar temel olarak dizin aşırı varus ve valgusunu sınırlandırır. Ön ve arka çapraz bağlar ise rotasyon hareketlerini kısıtlar (1, 3), (Şekil 1).

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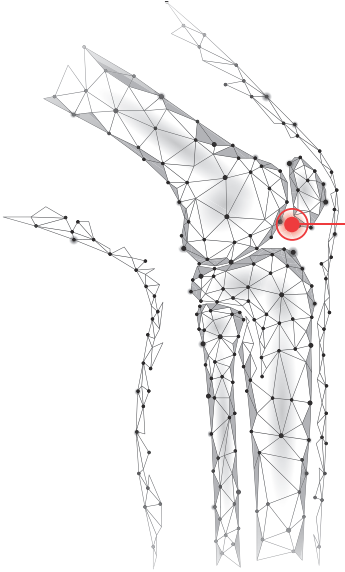

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Ayşe GÜÇ[2]

GİRİŞ

Diz ağrısı klinikte çok sık karşılaşılan şikayetlerden biridir. Sırt ağrısından sonra ikinci en yaygın kas-iskelet sistemi şikayetidir. Diz ağrısı yetişkinlerin yaklaşık %25'ini etkiler ve prevalansı son 20 yılda yaklaşık %65 artmıştır. Bu da 1 yılda yaklaşık 4 milyon defa diz ağrısı nedeniyle birinci basamak sağlık hizmeti kuruluşuna başvuru anlamına gelir

Diz ağrısını kategorize etmek için sırasıyla; akut-kronik ağrı ayrımı, travmatik-nontravmatik ağrı ayrımı yapılmalı, ardından efüzyon olup olmadığı saptanmalı ve ağrının yeri belirlenmelidir.

1. Adım: Akut ve Kronik Ağrının Ayrımı

Çoğu kas-iskelet sistemi rahatsızlığı için, altı haftadan kısa süren ağrılar akut veya subakut olarak sınıflandırılırken, altı haftadan uzun süren ağrılar kronik olarak sınıflandırılır. Bununla birlikte, minör kas-iskelet sistemi rahatsızlıklarının çoğu, uygun aktivite değişikliği ile başlangıcından itibaren altı hafta içinde düzelir.

Akut diz ağrısı, doğrudan bir travma sonucu veya düzenli aktivite sonucu oluşan aşırı kullanıma bağlı oluşan yaralanmalar sonucu gelişebilir. Ya da trav-

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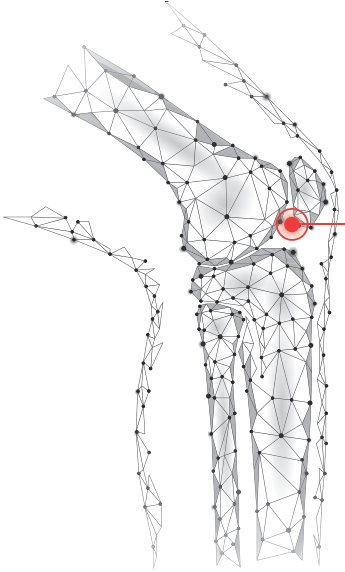

BÖLÜM 4

DİZ AĞRILARINDA LABORATUVAR BULGULARI

Çağlar KARABAŞ[1]

GİRİŞ

Diz eklemi, yük taşıyan, yürürken stabiliteden ve dengeden sorumlu olan bir yapıdır. Diz ekleminin travmalara açık olması ve dejeneratif hasarın sık görülmesi nedeniyle günlük pratikte diz ağrısı şikayeti ile sıklıkla karşılaşılmaktadır. Diz ağrısı nedenleri; artiküler, periartiküler, osseöz nedenler ve yansıyan ağrılar olarak sınıflandırılabilir. Diz ağrısı altı haftadan kısa ise akut ya da subakut ağrı, altı haftadan uzun ise kronik ağrı olarak sınıflandırılır. Akut diz ağrısı nedenleri, sıklıkla travmaya maruz kalma sonucunda görülmekteyken; kronik nedenler dejeneratif eklem hasarına bağlı ve/veya romatolojik hastalıklara bağlı olarak görülebilmektedir. Diz ağrısı ile gelen hastada tanıda anamnez ve fizik muayene önemli bir yer tutmaktadır (1, 2). Ancak diz ağrısı nedenlerinin ayırıcı tanısı için laboratuvar ve görüntüleme yöntemlerinden yararlanmak gerekebilir. Ayırıcı tanıda, tanısal testlerin pozitif veya negatif olması, travmaya bağlı olup olmadığı, akut ya da kronik olması, romatizmal hastalığın kendisinde ya da ailesinde olması istenilecek görüntüleme yönteminin ve laboratuvar tetkiklerinin seçiminde bizlere fikir verir. Görüntüleme yöntemi olarak, konvansiyonel radyografi, Manyetik Rezonans Görüntüleme (MRG), Bilgisayarlı Tomografi (BT) ve son zamanlarda kas iskelet sistemi hastalıklarının tanı ve tedavisinde sıklıkla

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kısa kolundaki MEFV geninde mutasyonlar vardır. En sık görülen mutasyonlar M694V, V726A, M694I, M680I ve E148Q şeklindedir(59, 60). Diz tutulumu ile gelen bir hastada FMF'ten şüphelenildiğinde, akut faz reaktanları ile genetik mutasyonlar için gen analizine bakmak tanıda bizlere yardımcı olur. Ancak %10-20 hastada gen analizi normal olabileceğinden, klinik muayene, laboratuvar ile desteklenerek tanı ve ayırıcı tanı hakkında sonuca varılmalıdır (61).

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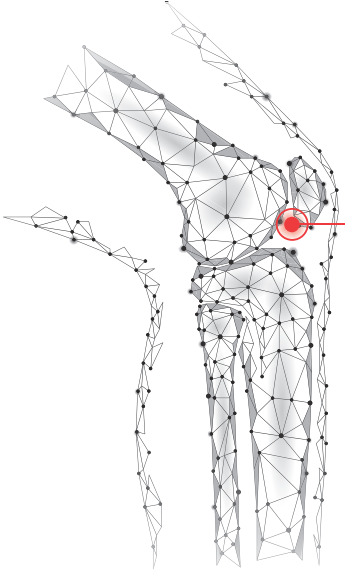


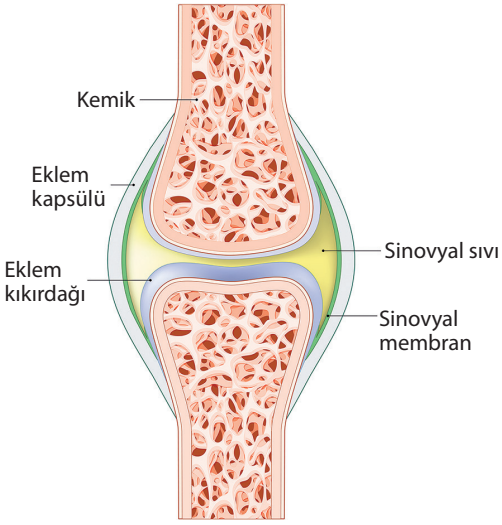
BÖLÜM 5

SİNOVYAL SIVI ANALİZİ

Hatice SAYAN[1]

GİRİŞ

Tipik bir sinovyal eklem; sinovyum, eklem kıkırdağı, menisküs, çizgili kaslar, tendonlar, ligamanlar, bursalar ve subkondral kemikten oluşur. Sinovyum, kıkırdakla eklemleşen yüzeylerin dışında tüm intraartiküler yüzeyi örter (Şekil 1).



Şekil 1. Sinovyal eklemi oluşturan yapıların koronal kesitte görünümü.

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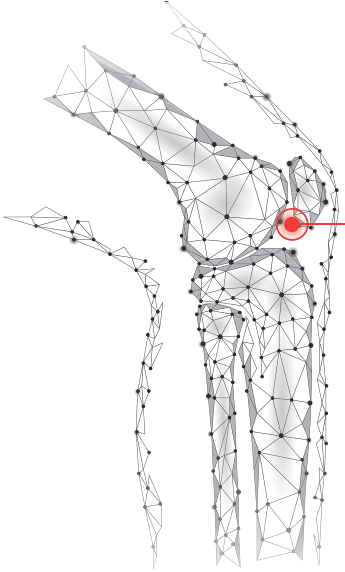

BÖLÜM 6

DİZ AĞRILARINDA GÖRÜNTÜLEME BULGULARI

Elif AKTAŞ1

GİRİŞ

Diz eklemi vücudun ağırlığını taşıyan en büyük eklemdir(1). Diz ağrısı yetişkinlerin %25ini etkilemekte olup son 20 yılda prevalansı %65 oranında artmıştır(2). Diz ağrılarını ortaya çıkış zamanına göre akut-kronik diz ağrıları, neden olan etyolojiye göre travmatik- non travmatik ve lokalizasyonuna göre anterior, posteromedial ve posterolateral diz ağrıları olarak sınıflandırabiliriz.

Diz ağrısı ile gelen hastaya anamnez ve fizik muayeneden sonra genellikle direkt grafi (DG) incelemesi istenir. DG incelemeleri başta travma olmak üzere birçok diz ağrısı nedeni için problem çözücüdür. Anterior diz kompartmanlarında ve yüzeysel dokuların değerlendirmesinde ultrason(US) ikincil olarak istenecek tetkiktir. Bilgisayarlı Tomografi (BT) kortikal kemik değerlendirmesinde diğer modalitelerden üstündür. Kemik destrüksiyonunu, DG' de görülmeyen fraktürlerin tespitinde , intra-artiküler kemik fragmanların ve 'loose body' tespitinde kullanılabilir. Manyetik rezonans görüntüleme (MRG) dizin çapraz ve yan bağlarını, menisküsleri, sinovial yapıları, inceleme dahil kemik iliğini yapısal olarak göstermesi yanı sıra tüm yapıların patolojilerini yüksek doğrulukla göstermektedir(3).

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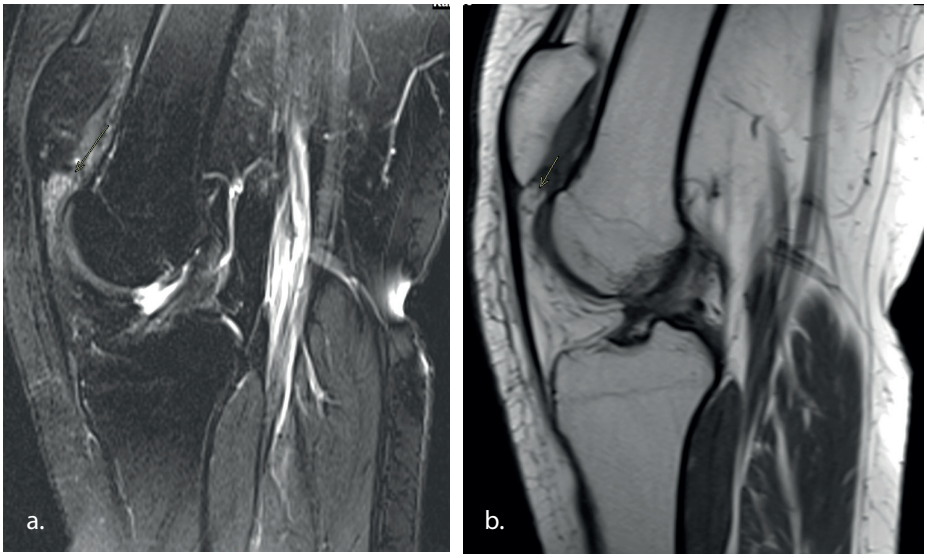

Şekil 19. a. T2 ve b. T1 sagittal görüntülerde patellanın yüksek konumlu olmasına sekonder ortaya çıkan patello femoral sıkışma ve infrapatellar yağ yastıkçığında intensite artışı izlenmektedir.

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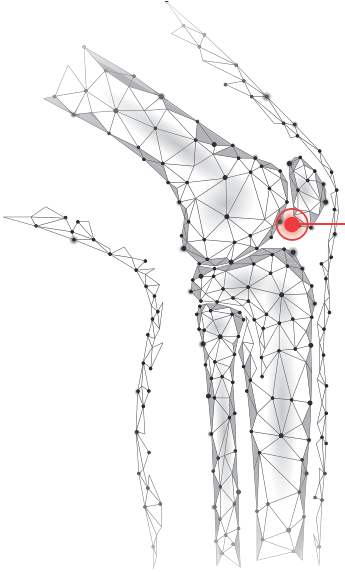

BÖLÜM 7

DİZ OSTEOARTRİTİ

Fatma Gül ÜLKÜ DEMİR[1]

GİRİŞ

Osteoartrit (OA), eklemin tüm dokularını etkileyen, kıkırdak yıkımı, kemik yeniden şekillenmesi, osteofitler ve sinovit içeren düşük dereceli bir enflamasyon hastalığıdır (1, 2). OA, sıklıkla yük taşıyan eklemleri etkiler bununla birlikte kalça, el, ayak eklemleri ve omurgadaki eklemleri tutabilir.

OA, başta diz eklemi olmak üzere potansiyel olarak tüm sinovyal eklemleri etkiler. Dünyada en yaygın artrit formu olan OA, eklem kıkırdağında tutulum yaparak kıkırdak erozyonu, osteofitler ve subkondral skleroza (eburnasyon), eklem faresi (loose body), deformiteye neden olmaktadır (1-3). Normal ve osteoartritli diz şematik görünümü Şekil 1'de gösterilmiştir.

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Non-farmakolojik tedaviler: Kilo verme, aktivite modifikasyonu, egzersiz (Tai Chi, yoga, akuatik ve kara tabanlı egzersizler), kendi kendine yönetim, bilişsel davranışsal tedavi, tibiofemoral ve patellofemoral diz breysi, baston kullanımı, ısı, terapotik soğuk gibi fizik tedavi modaliteleri, akupunktur, kinezyoteyp, denge eğitimi, radyofrekans ablasyon gibi fiziksel, psikososyal ve zihin-beden yaklaşımlarını içerir (32, 60).

Farmakolojik tedaviler: Topikal nonsteroid anti inflamatuarlar (NSAİİ), topikal kapsaisin, oral NSAİİ, intraartiküler steroidler, asetominofen, tramadol, duloksetini içerir. Bununla birlikte intraartiküler uygulamalardan; platelet rich plazma (PRP), stromal vasküler fraksiyon (*SVF*), hyalüronik asit tedavilerinin diz osteoartritinde kullanımı ile ilgili mevcut kılavuzlarda farklı tavsiyeler yer almaktadır (60, 62)

Non-farmakolojik ve farmakolojik tedaviye yanıtsız, günlük yaşam aktiviteleri etkilenen, ileri evre diz osteartritinde cerrahi tedavi uygulanmaktadır. DOA'da cerrahi tedavi yaklaşımları arasında artroskopik debridman, osteotomi ve artroplasti yer almaktadır. Bununla birlikte DOA'da son dönemlerde yapılan meta-analizlere göre dejeneratif diz artriti veya dejeneratif menisküs yırtıklarının tedavisinde konservatif tedaviye üstün olmaması nedeniyle artroskopik debridman birincil tedavi olarak önerilmemektedir (63).

DOA tedavisi, radyolojik görüntülemesi ve sinoviyal sıvı analizi diğer bölümlerde ayrıntılı olarak tartışılacaktır (Bakınız: *"Diz osteoartriti tedavisi"*,*"Romatizmal diz hastalıklarında radyolojik görüntüleme"* ve "Diz hastalıklarında s*inoviyal sıvı analizi"* bölümü).

Teşekkür: *Sayın Doç. Dr. Elif Aktaş'a radyolojik görsel paylaşımı ile bölüme katkılarından dolayı teşekkür ederim.*

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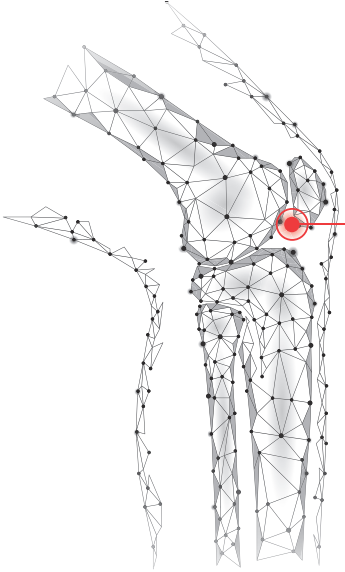

BÖLÜM 8

İNFLAMATUAR ROMATOLOJİK HASTALIKLARDA DİZ TUTULUMU

Gizem CENGİZ[1]

GİRİŞ

Diz eklemi vücudumuzun önemli ve güçlü eklemlerinden bir tanesidir. Diz femur ve tibia ve patella arasındaki eklemlerden oluşur. Bu bölümde inflamatuar romatizmal hastalıklarda diz tutulumu anlatılmaktadır.

ROMATOİD ARTRİT DİZ TUTULUMU

Romatoidartrit (RA) etyolojisi tam olarak bilinmeyen kronik inflamatuar, ciddi eklem kıkırdağı ve kemik yapı hasarı ile karakterize progresif, sakatlayıcı romatizmal bir eklem hastalığıdır(1). RA, dizin en sık görülen inflamatuar romatizmal hastalığı olup karakteristik olarak simetrik küçük eklem hastalığı olarak kabul edilmesine rağmen uzun süreli hastalığı olan bireylerde %70-80 oranında tutulumu görülebilir. Diz çevresindeki kaslarda atrofi ile birlikte eklem kontraktürü, baker kisti, valgus deformitesi, yürüme güçlüğü, gibi şiddetli geç evre sinovit bulgularının eşlik ettiği bir klinik tablo şeklinde de karşımıza çıkabilmektedir(2). RA'nın en önemli ayırt edici özelliklerinden başlıcaları hafiften şiddetli dereceye kadar değişen eklem sinoviti, sinovyal hiperplazi, anjiyogenez, pannus oluşumu, kıkırdak yıkımı, kemik erozyonu, yeni periostal kemik oluşumu, kemik matrisi rezorpsiyonu, kemik iliği ödemi dahil olmak üzere eklem yı-

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ayene bulguları negatif olmasına rağmen ultrasonografi ile inflamasyon olduğu görülmüş. SLE hastalarının ultrasonografi ile değerlendirme dahil tüm yönlerden global olarak değerlendirilmeleri gerektiği vurgulanmıştır(26).

Sistemik Skleroderma Diz Tutulumu

Sistemik skleroderma hastalarında kas ve iskelet sistemi tutulumu yaygın olup, eklem kontraktürleri görülebilir. Literatürde diz ekleminin kontraktürü ile ortaya çıkan vakalar bildirilmiştir. Bu nedenle kontraktürle gelen hastalarda sistemik skleroderma da düşünülmelidir(27).

SONUÇ

Diz eklemini etkileyen romatizmal hastalıklar yukarıda anlatılanlar dışında da mevcut olup, anlatılanlar günlük romatoloji polikliniğinde en sık karşılaştıklarımızdan oluşmaktadır. Diz eklemi de diğer eklemlerimiz gibi önemle değerlendirilmeli, takip ve tedavide erken davranılmalıdır.

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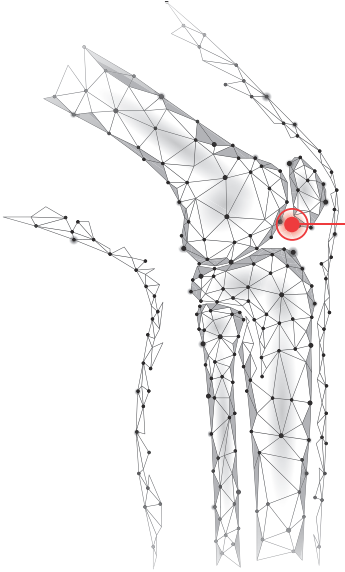

BÖLÜM 9

ÇOCUKLUK ÇAĞINDA GÖZLENEN DİZ EKLEMİ RAHATSIZLIKLARI

Ayşe GÜÇ[1]

GİRİŞ

Çocuk hastalarda ayrıntılı anamnez ve fizik muayene, diz ağrısının nedenini bulmak ve uygun tedaviyi düzenlemek için bize rehberlik eder. Ağrı ne zaman başladı, akut mu, kronik mi, eşlik eden travma, şişlik var mı, ağrıyı artıran ve azaltan nedenler, ağrının istirahat ve hareketle olan ilişkisi, ağrının ağrı kesicilere olan yanıtı, gece terlemesi, ateş, kilo kaybı gibi durumlar sorgulanmalıdır. Bu edinilen bilgiler neticesinde ağrının mekanik veya enflamatuar karakterde olup olmadığı ayırt edilmelidir. Eklemlerde şişlik, sabah tutukluğu, gece ağrısı enflamatuar ağrıda sık gözlenmektedir. Enflamatuar ağrıyı saptamak için kırmızı bayrak işaretleri kullanılabilir (Tablo 1) (1, 2). Mekanik ağrı ise genel olarak aktivite ile artar, istihrat ile azalır. Anamnezde eşlik eden travma, aşırı kullanım saptanabilir. Fizik muayenede kilitlenme, takılma gibi mekanik bulgular gözlenir ve genellikle kendiliğinden iyileşir. Çocukluk çağında sık gözlenen diz ağrısı nedenleri tablo 2'de verilmiştir.

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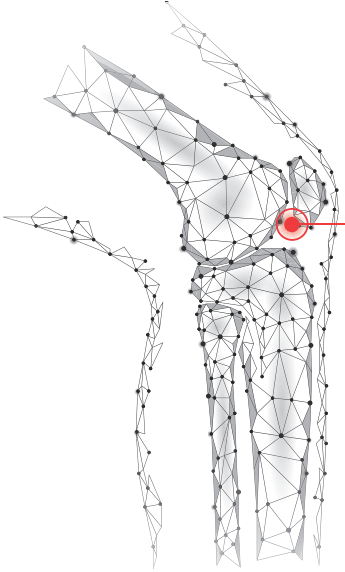

BÖLÜM 10

DİZ EKLEMİNİN NEOPLASTİK HASTALIKLARI

Büşra YILMAZ[1]

GİRİŞ

Neoplazinin gerçek anlamı 'yeni büyüme'dir. Neo: yeni; plasm: oluşum, gelişme, büyüme anlamındadır. Herhangi bir sınırlama göstermeden konak canlının kontrol mekanizmaları dışında hareket eden, kontrolsüz hücre çoğalmasıyla ilerleyen anormal doku kitlesidir. Bugün tıp dilinde yaygın kullanılan neoplastik hastalıklar malign ve benign tümörler olarak ikiye ayrılabilir. Alt ekstremite kemik ve yumuşak doku tümörlerinin sık yerleştiği vücut bölgelerden biridir. En sık da diz eklemi çevresinde saptanmaktadır (1).

Kemik ve kemik dışı bağ dokunun kötü huylu neoplazmları sarkom olarak adlandırılır. Bu malign tümörler benign tümörlerden daha nadir görülmektedir. Benign tümörler sıklıkla semptomsuz olduğundan çoğunlukla tesadüfen tespit edilirler bu nedenle sıklığı net olarak bilinmemektedir. Kemiğin kötü huylu tümörleri ise tüm malign tümörlerin %1'i kadardır (2, 3).

Benign neoplazmlar olarak osteoid osteoma, osteokondrom, enkondrom, kondroblastom, kondromiksoid fibrom, liposklerozan miksofibroid tümör, dev hücreli kemik tümörü , lipom en sık görülenlerdir. Osteosarkom, kondrosarkom ve Ewing sarkom en sık görülen primer malign tümörlerdir. Adamantimoma ise kemik olarak tibiaya özgü yerleşimi sebebiyle akla gelmelidir. Alt ekstremitede özellikle de diz çevresinde tümör benzeri lezyonlar da akılda

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periferik ve septal parlaklaşma vardır. Evre 1 kondrosarkom enkondromla karışabilir. Kortikal kalınlığın fazla olması, lezyon boyutunun >5cm olması, dokunun içinde yağ lobüllerinin olmaması evre 1 kondrosarkom lehinedir (41, 42).

Liposarkom

50-70 yaş aralığında görülen yumuşak doku sarkomudur. Alt ekstremite, retroperitoneal bölge, inguinal alan en çok yerleşim bölgesidir (43).

Sinoviyal Sarkom

En sık genç erişkinlerde, alt ekstremitede görülen yumuşak doku sarkomudur. En çok popliteal alanda görülür (44).

KAYNAKLAR

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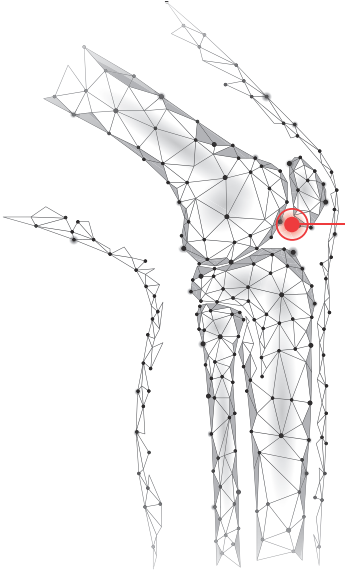

BÖLÜM 11

MENİSKÜS LEZYONLARI

Havva TALAY ÇALIŞ[1]

GİRİŞ

Menisküs yaralanmaları en sık görülen spor yaralanmalarıdır (1).

Akut diz yaralanmalarının çoğunluğu (%93.5) bağ, tendon ve menisküs yırtıkları dahil olmak üzere yumuşak doku hasarı içerir (2).

Yılda 100000 diz yaralanması başına, akut menisküs yaralanması sayısı; 60-70 arasında değişmektedir. 40 yaş üstünde ve erkeklerde oran daha fazladır (3).

Medial menisküs bu vakaların% 75'inde yer alır. Medial menisküs yırtığı daha çok kronik ön çapraz bağ yırtığı, lateral menisküs yırtığı ise akut ön çapraz bağ yırtığı ile birlikte görülebilir(4).

Menisküs yırtıkları dizde ağrı, hareket kısıtlılığı, efüzyon ve ileri dönemlerde erken osteoartrite neden olduğu için mutlaka tedavi gerektirir (5).

Anatomi

Diz ekleminde medial ve lateral olmak üzere iki menisküs vardır, bunlar femoral kondiller ve tibial platolar arasında yer alırlar. Aksiyel kesitte C şeklinde, enine kesitte üçgen şeklinde olan fibrokartilajinöz yastıklardır (Şekil 1) (6). Dize binen yük kuvvetlerinin dağıtılmasına, hareket sırasında diz ekleminin yağlanmasına ve rotasyon sırasında dizin stabilize edilmesine yardımcı olurlar.

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Konservatif tedaviye rağmen düzelmeyen kalıcı eklem efüzyonları veya tekrarlayan kilitlenme gibi mekanik işlev bozukluğuna neden olan bir menisküs yırtığı, bir ortopedi cerrahına sevk edilebilir. Ancak genel olarak mevcut araştırmalar; dejeneratif menisküs yırtıklarının cerrahi tedavisinin hem kısa hem de uzun vadede etkisiz olduğunu göstermektedir (29, 37).

Prognoz

Cerrahi tedavide 35 yaşından küçük hastada, akut travmatik radial yırtık, kırmızı kırmızı zonda lokalize ve kıkırdak hasarı yok ise iyidir. Hatta menisküs onarımı yapılan bu hastalarda bile osteoartrit gelişim riski menisküs yaralanmasının tipine ve kapsamına, yapılan cerrahi prosedüre göre değişik oranlarda mevcuttur (38, 39). Dejeneratif yırtıklar ise cerrahi daha kötü bir prognozla ilişkilidir (37). Mutlaka konservatif tedavi denenmelidir. Özellikle lateral menisektomi genç sporcularda hızlı kondroliz gibi çok ciddi bir komplikasyon riski taşır. Bu da efüzyon ve kalıcı ağrı ile karakterizedir (40).

Postoperatif menisküs rehabilitasyon protokolleri sonraki bölümde anlatılacaktır.

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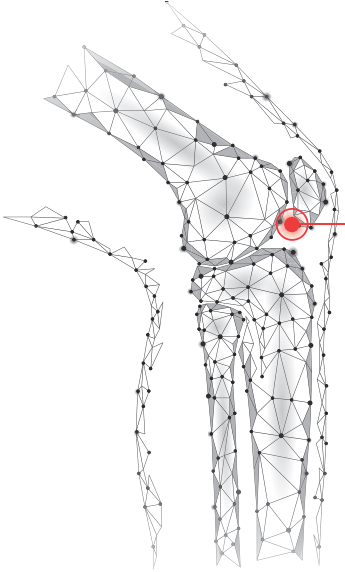

BÖLÜM 12

POSTOPERATİF MENİSKÜS REHABİLİTASYONU

Mehmet KÖKSAL[1]

GİRİŞ

Parsiyel Menisektomi Sonrası Rehabilitasyonu

İyileşme sürecinde korunması gereken anatomik bir yapı olmadığı için rehabilitasyon agresif bir şekilde ilerleyebilir(1). Parsiyel menisektomi sonrası rehabilitasyon programındaki hedeflerimiz ağrı ve ödemin erken kontrolü, erken ağırlık verilmesi, tam bir eklem hareket açıklığı elde edilmesi ve sürdürülmesi ve kuadriseps kas kuvvetinin yeniden kazanılmasıdır (1). Menisektomi sonrası rehabilitasyon programının 3 fazı vardır. Aşağıdaki tablolarda (Tablo 1, tablo 2, Tablo 3) kliğinimizde uyguladığımız rehabilitasyon programına yer verilmiştir.

Birinci faz ameliyat sonrası ilk 10 günlük dönemdir(2):

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Tablo 7. Menisküs onarımı için rehabilitasyon protokolü (1, 3, 5)	
	Faz 4: spora dönüş aşaması (6-8. Aylar)
• Hedefler	• Gücü ve dayanıklılığı geliştirmek • Sınırsız faaliyetlere hazırlanın • Çeviklik antrenmanlarında ilerleme
• Fonksiyonel hedefler	• Spora özgü fonksiyonel ilerleme
• Değerlendirilmesi gereken parametreler	• Yürüyüş • Fonksiyonel test • Efüzyon
• Egzersiz program protokolünde hedeflenenler	• Güçlendirme egzersizleri • Dayanıklılık egzersizleri • Spora özel idmanlar
• Egzersiz ve fizik tedavi programı	• Tüm güçlendirme egzersizlerine ve germe egzersizlerine devam etmek ve ilerletmek • Gelişmiş izotonik program • İleri evre fonksiyonel eğitim • Bisiklet, eliptik makine • Spora özel egzersizler • Kademeli olarak spora dönüş: 7-8 ay

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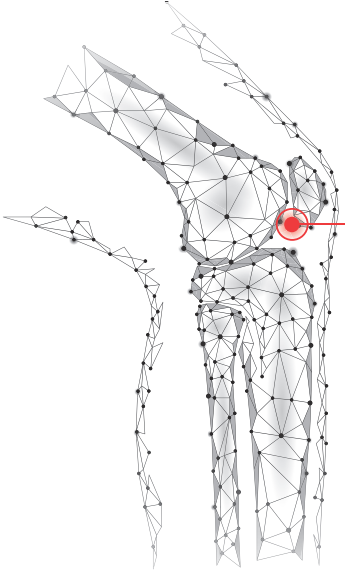

BÖLÜM 13

DİZ BAĞ YARALANMALARI

Yurdagül BAYGÜL ATALAY[1]

ÖN ÇAPRAZ BAĞ (ANTERIOR CRUCIATE LIGAMENT) YARALANMALARI

Ön çapraz bağ (ÖÇB) anterior tibial translasyonu ve dizin iç rotasyonunu önleme işlevi görmektedir. ÖÇB rüptürü dünya çapında yaygın bir yaralanmadır ve tüm dünyada 100.000 kişide yıllık insidansının 35 olduğu düşünülmektedir. Kadın sporcularda yaralanma riskinin erkeklere göre yaklaşık iki ila sekiz kat daha yüksek olduğu bildirilmektedir (1-3).

ÖÇB; diz eklemini stabilize eden dört ana bağdan biridir (Şekil 1) ve anterior translasyona karşı oluşturulan stabilizasyonun %90'ından sorumludur (4). ÖÇB; pasif diz ekstansiyonunda yaklaşık 100 N, yürüme sırasında 400 N, sıçrama ve yön değiştirme hareketleri sırasında 1700 N kuvvete maruz kalmaktadır (5). ÖÇB; tibia yapışma yerine göre adlandırılan iki demetten oluşmuştur. Anteromedial (AM) demet 30-130° arası fleksiyonda daha gerginken 0-30° arasında daha gevşektir. Posterolateral (PL) demet ise ekstansiyonda tam gergin iken 90° fleksiyona doğru gevşer sonrasında yine gerginleşir. PL demetin lateral yerleşimi nedeniyle tibial rotasyonu daha çok kontrol ettiği düşünülmektedir (6).

ÖÇB yaralanmaları sıklıkla kontakt olmayan yaralanmalardır ve kendi ekseni etrafında dönme (pivoting) ve ani yavaşlama hareketi içeren basketbol, futbol, hentbol gibi sporlarda sık görülmektedir (7). Yaralanma sıklıkla iniş

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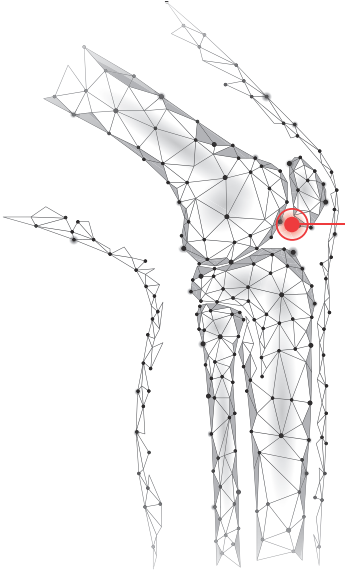

BÖLÜM 14

DİZ BAĞ YARALANMALARI TEDAVİ VE REHABİLİTASYONU

Ayşe Nur KOZAN[1]

ÖN ÇAPRAZ BAĞ REKONSTRÜKSİYONU POSTOPERATİF REHABİLİTASYON PROGRAMI

Ön çapraz bağ (ÖÇB) rekonstrüksiyonu sonrası rehabilitasyonun amacı, yeterli diz fonksiyonu ve fiziksel aktivite seviyesine ulaştırmaktır (1). ÖÇB rekonstrüksiyonu sonrası rehabilitasyon, en az 6 ay sürmekle birlikte hastanın ihtiyacına göre spora dönüş aşamasına kadar devam etmelidir. Rehabilitasyon, cerrahide kullanılan grefte, eşlik eden diğer yaralanmalara ve tamirlere, hastanın yaşına ve fiziksel aktivite seviyesine göre değişiklik göstermektedir (2, 3). Hamstring tendon otogreftinde ve allogreftte rehabilitasyon patellar tendon (kemik-tendon-kemik) otogreftine göre daha kontrollü ve yavaş ilerlemelidir. Bununla birlikte sporcularda rehabilitasyon sedanter bireylere göre daha agresif ilerlemelidir. Ameliyat öncesi rehabilitasyonun ameliyat sonrası dönemdeki fonksiyonel performans üzerine önemli katkısı bulunmaktadır (4). Cerrahi sonrası ekstansiyon kısıtlılığının temel belirleyicisi, cerrahi öncesi mevcut ekstansiyon kısıtlılığıdır. Kuadriseps kas kuvvetinde %20'den fazla kaybın olması cerrahi sonrası diz fonksiyon indeksi değerlerinin düşük olmasına neden olduğu gösterilmiştir (5). Bu nedenle, cerrahi öncesi en az altı haftalık rehabilitasyonla diz fonksiyonlarının normalize edilmesi ve hastanın cerrahiye hazırlanması önemlidir (6). ÖÇB rekonstrüksiyonu sonrası patellar tendon greftinin tünel içine

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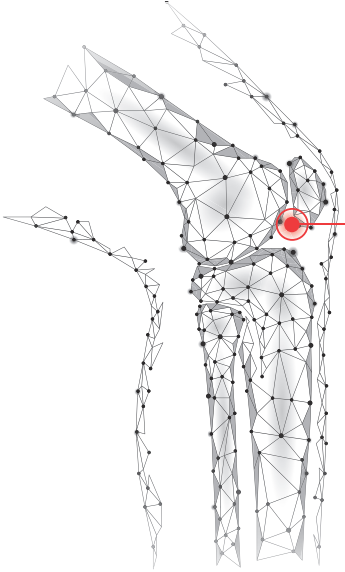

BÖLÜM 15

DİZ ARTROPLASTİSİ VE REHABİLİTASYONU

Duygu GÖKBELEN BİLEN[1]

GİRİŞ

Total diz artroplastisi (TDA), dizin sağlıklı olmayan eklem yüzeylerinin rezeksiyonu ve ardından metal ve polietilen protez bileşenleri ile yüzey yenileme işleminden oluşur. Doğru endikasyonda, doğru hastada yapıldığında önemli ölçüde ağrı azalması, fonksiyon ve yaşam kalitesinde iyileşme sağlar. Ancak TDA hiçbir zaman birinci basamak tedavi değildir. Cerrahi olmayan tedavilerden fayda görülmediği zaman, risk-fayda değerlendirmesi yapıldıktan sonra düşünülmelidir.

TDA, son birkaç dekatta, özellikle ileri evre diz osteoartritli hastalar başta olmak üzere milyonlarca insanın hayat kalitesini anlamlı ölçüde iyileştiren, yaygın olarak kullanılan bir ameliyattır. Çalışmalar, TDA'nın hastanede yatış sırasında en sık yapılan işlemlerden biri olduğunu ve ulusal kayıtlara göre her yıl dünya çapında sürekli artan sayıda ameliyat yapıldığını göstermiştir (1). Dünya nüfusunun yaşlanması ve obezitenin artışını da göz önüne aldığımızda TDA ihtiyacındaki artışın da kaçınılmaz olacağını öngörmek zor olmamaktadır.

Yapılan araştırmalara göre 1991'den 2010'a kadar Amerika Birleşik Devletleri'nde yaşlı hastalar arasında, kişi başına birincil TDA sayısı iki katına çıkmış. Revizyon TDA hacmi ise %105.9 artış göstermiş (2). Dünyadaki en yüksek diz artroplastisi oranına sahip olan ABD'deki TDA sayısının 2012 yılına kıyasla

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ilgili bazı teknik detaylar hala güçlü bir tartışma konusudur (1). Kişiye özel rehabilitasyon programlarının sağlanması, ameliyattan sonra bireysel sonuçların en üst düzeye çıkarılmasına yardımcı olabilir. Ancak bunlar için hala daha fazla araştırmaya gerek vardır.

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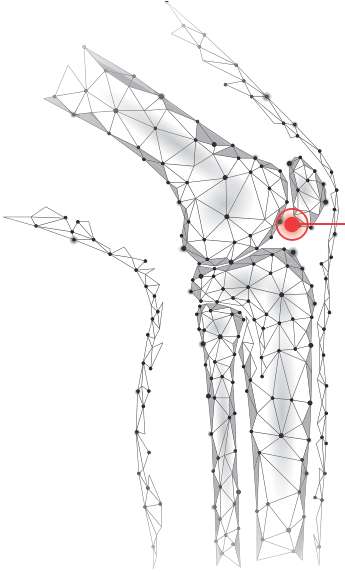

BÖLÜM 16

DİZ OSTEOARTRİTİNDE FARMAKOLOJİK VE NONFARMAKOLOJİK TEDAVİ YÖNTEMLERİ

Neslihan YAĞMUR[1]

GİRİŞ

Osteoartrit (OA), eklemi oluşturan kıkırdak ve periartiküler yapıların etkilendiği dejeneratif bir hastalıktır. Aynı zamanda en sık görülen artrit formu olup, kıkırdak yıkımı, kemik yeniden şekillenmesi, osteofit oluşumu ve sinovyal inflamasyon dahil olmak üzere tüm eklemi içeren, ağrı, sertlik, şişme ve normal eklem fonksiyonunun kaybı ile karakterizedir. OA tedavisinde kullanılan konvansiyonel ve alternatif tedavi yöntemleri Tablo-I' de nonfarmakolojik- farmakolojik olarak kategorize edilmiştir.

Tablo 1. Diz osteoartritinde farmakolojik ve nonfarmakolojik tedavi yöntemleri

Nonfarmakolojik Tedavi Yöntemleri	Farmakolojik Tedavi Yöntemleri
Hasta eğitimi ve kilo vermenin önerilmesi	Asetaminofen
Ortezler	Nonsteroid Anti-İnflamatuar İlaçlar (Nsaid)
Yürüme yardımcı cihazlar	Duloksetin
Egzersiz	Kapsaisin
Fizik tedavi ajanları	Opioid analjezikler
Manuel terapi, masaj	Besin takviyeleri
Tai Chi, Yoga	Glukozamin ve kondroitin sülfat
Bilişsel davranışçı tedavi	Diaserein
Akupunktur	Eklem içi enjeksiyon tedavileri
Kinezyobantlama	Yeni tedavi yöntemleri

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Güncel kılavuzlara göre; ACR, TNF alfa, IL-1 inhibitörleri, metotreksat ve hidroksiklorokini önermez (güçlü karşı öneri). Analjezik etkisi olabileceğinden kolşisini koşullu karşı öneri olarak belirtmiştir. Ayrıca botulinum nörotoksin eklem içi uygulamasının OA' da herhangi bir etkisi görülmediğinden koşullu karşı öneri olarak belirtilmiştir (7). Diğer yeni tedaviler kılavuzlarda yer almamaktadır.

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