NÖROLOJİK HASTALIKLARDA GÜNCEL TEDAVİLER

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BÖLÜM 1

PARKİNSON HASTALIĞI TEDAVİSİ

Yunus Emre AKTAŞ[1]

Parkinson hastalığı (PH), substantia nigra pars compacta içinde dopamin üreten nöronların ilerleyici kaybı ve Lewy cisimleri olarak bilinen stoplazmik protein birikimlerinin varlığı ile karakterize, kronik ve ilerleyici bir nörodejeneratif hastalıktır. İlk olarak 1817 yılında James Parkinson tarafından tanımlanan bu hastalık, günümüzde yaşla ilişkili önemli bir nörolojik hastalık olarak kabul edilmektedir ve 60 yaşın üzerindeki nüfusun yaklaşık %1'ini etkilemekte olup, prevalansı yaşla birlikte artmaktadır [1,2]. Birincil motor semptomlar bradikinezi, kas rijiditesi, istirahat tremoru ve postural instabiliteden oluşur. Bunların yanı sıra, bireyler koku bozukluğu, kabızlık gibi gastrointestinal rahatsızlıklar, REM uyku davranış bozukluğu, depresyon gibi ruh hali ile ilgili sorunlar ve otonomik disfonksiyonlar gibi çeşitli motor dışı semptomlar da yaşayabilirler [3,4]. Özellikle, bu motor dışı belirtilerin çoğu motor semptomlardan birkaç yıl önce ortaya çıkabilir ve genellikle hastalığın prodromal aşamasında belirgindir [5].

Hastalığın etiyolojisi karmaşık ve çok faktörlüdür; genetik yatkınlıklar (özellikle SNCA, LRRK2 ve PARK2 genlerindeki değişiklikler) ile çevresel maruziyetler, oksidatif stres, mitokondriyal anomaliler ve yaşlanma süreçleri bir arada rol oynamaktadır [6]. Teşhis büyük ölçüde klinik olarak yapılmaktadır, ancak kesin doğrulama genellikle postmortem nöropatolojik değerlendirme gerektirmektedir [7]. Şu anda, tedavi yaklaşımları semptom kontrolüne odaklanmaktadır ve hastalığın evresi, hastanın yaşı ve eşlik eden sağlık durumlarına göre kişiselleştirme esastır [8].

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gibi yenilikler PH tedavisini yeniden şekillendirmeye devam edecektir. Kişiye özel, çok disiplinli bir yaklaşım, hem mevcut bakımı optimize etmek hem de gelecekteki gelişmeleri şekillendirmek için hayati önemini korumaktadır.

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BÖLÜM 2

ESANSİYEL TREMOR TEDAVİSİ

Tuba ERDOĞAN SOYUKİBAR[1]

Giriş

Esansiyel tremor (ET) toplumda en sık görülen ve yaş ilerledikçe görülme sıklığı artan hareket bozuklukları arasındadır. Dünya geneli prevalansı %0,32'dir ve erkeklerde (%0,36) tüm yaşlarda kadınlara (%0,28) göre daha yüksek prevalans oranı saptanmıştır [1]. Ülkemizde yapılan çalışmalarda ET prevalansı %1,6 [2] %3.09 [3], %5.8 [4] olmak üzere farklı oranlarda bulunmuştur. Genç yaşlarda da görülebilir ancak ileri yaşlarda görülme sıklığı artmaktadır, 65 yaş üzeri popülasyonda prevalans %4-5 olarak bulunmuştur [1, 5].

Esansiyel tremor 4-12 Hz frekansında, bilateral üst ekstremitenin simetrik veya asimetrik olarak etkilendiği postüral/kinetik tremoru ile karakterizedir [6]. Hastalarda sıklıkla aile öyküsü mevcuttur ve düşük miktarda alkol kullanımı tremorda düzelme sağlayabilir [7, 8].

Tanı kriterleri 2018 Uluslararası Parkinson ve Hareket Bozukluğu Derneği (IPMDS) tarafından tanımlanmıştır [8]. Tanı kriterlerinde şu özelliklerin karşılanması gerekir:

- Bilateral üst ekstremitede izole aksiyon (kinetik ve/veya postüral) tremoru
- En az 3 yıllık süre
- Diğer lokasyonlarda (örn. baş, ses veya alt ekstremiteler) tremor eşlik etsin veya etmesin
- Distoni, ataksi veya parkinsonizm gibi diğer nörolojik bulguların olmaması

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ciltte irritasyon, batıcı ağrı, güçsüzlük hissi gibi yan etkiler gözlenmiştir [57]. Geliştirilmekte olan başka periferik sinir uyarım cihazları da mevcuttur [56].

Lokal titreşim cihazları da ET tedavisinde uygulanabilirlik açısından araştırılmıştır. Yapılan çalışmalar randomize kontrollü olmadığı ve küçük bir hasta popülasyonu kullanıldığı için tedavi etkinliğini değerlendirmede yeterli kanıt yoktu. Uygulama sonrası tremorun azaldığını, değişmediğini ve arttığını bildiren katılımcılar mevcuttu [58, 59].

Sonuç

Esansiyel tremor, kişinin yaşam kalitesini değişen oranlarda olumsuz etkileyebildiğinden; tedavi planı hastanın mesleği, yaşı, eşlik eden komorbid hastalıkları, kullandığı ilaçlar dahil göz önünde bulundurularak oluşturulmalıdır. Tüm bu değerlendirmeler sonucunda bütüncül bakış açısı ile tedavi seçenekleri belirlenip, tedavi yöntemi seçiminde kişiselleştirilmiş yaklaşım benimsenmelidir.

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BÖLÜM 3

DİSTONİ TEDAVİSİ

Buse Çağla ARI[1]

Distoni, farklı etiyolojiye, çeşitli klinik tablolara ve farklı tedavi yanıtlarına sahip heterojen bir hastalıktır. Bu hastalığın patofizyolojisini anlamamızdaki önemli gelişmelere rağmen, çoğu distoni tipi için hastalık modifiye edici tedaviler mevcut değildir. Bununla birlikte, distoninin semptomatik tedavisi botulinum toksini (BoNT) ve derin beyin stimülasyonu cerrahisinin (DBS) kullanılmaya başlanmasından bu yana önemli ölçüde gelişmiştir (1).

Distoni tedavileri, hastanın yaşına, distonik semptomların anatomik dağılımına ve yan etkilere yönelik potansiyel riske dikkat edilerek bireyselleştirilmeli ve her hastaya göre uyarlanmalıdır. Tedaviler anormal hareketleri, duruşları ve rahatsızlığı iyileştirmenin yanı sıra duygudurum bozuklukları, kontraktürler ve ortopedik komplikasyonlar gibi komorbiditeleri yönetmeyi de amaçlamalıdır. Distoni tedavilerinde, DBS ve nörotoksin gibi yöntemlere ilişkin sağlam bir kanıt tabanı oluşmasına rağmen, diğer tedavi alanlarında iyi tasarlanmış ve kontrollü çalışmalara dair önemli eksiklikler bulunmaktadır (1,2). Distonide klinik çalışma tasarlanmasındaki zorluklardan bazıları, farklı distoni tiplerinin etiyolojisi ve klinik özelliklerindeki heterojenliktir. Ayrıca klinik ölçeklerin hastalığın alt tiplerinde tedaviler sonucu ortaya çıkan fonksiyonel değişimi yakalama yeteneğinin de sınırlı olması bir diğer nedendir. Birçok çalışma kontrolsüz olup yalnızca kısa dönem takip bilgileri sunmakta ve nispeten küçük örneklem büyüklüğüne sahiptir (1).

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olarak bulunurken, diğer kategorilerde kanıt düzeyinin "çok düşük" olduğu sonucuna varılmıştır. Sonuç olarak distoninin nadir görülmesi ve fenotipik değişkenliği göz önüne alındığında, randomize plasebo kontrollü çalışmaların altın standart olmasının rehabilitasyon müdahalelerinin değerlendirilmesi açısından pratik olmayabileceği düşünülmektedir. dikkatlice tasarlanmış, küçük ölçekli çalışmaların da dikkate alınmasını önerilmiştir (54-56).

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BÖLÜM 4

HUNTİNGTON HASTALIĞI TEDAVİSİ

Onur Serdar GENÇLER[1]

Giriş

Huntington hastalığı (HH), 1872 yılında George Huntington tarafından tanımlanan tam penetransa sahip, otozomal dominant kalıtım gösteren ilerleyici bir nörodejeneratif hastalık olup genellikle 30-50 yaşlarında başlar ve yaşam süresi yaklaşık 17-20 yıldır (1-3). Batı toplumlarındaki prevelansı yüz binde 10,6-13,7'dir (1). Klinik belirtileri ilerleyici motor, psikiyatrik ve kognitif bozukluktur (4). Motor semptomlardan kore, en göze çarpan bulgularındadır. Zamanla distoni, miyoklonus, tikler gelişir ve hastalık ilerledikçe parkinsonizm bulguları ortaya çıkar. HH tanısı almadan yıllar önce silik kognitif semptomlar başlayabilir. Nöropsikiyatrik belirtilerin de hastaların fonksiyon kaybına ciddi derecede katkıda bulunduğu gözlenmiştir (5)

Huntington hastalığından sorumlu gen, dördüncü kromozomun kısa kolunda (4p16.3) yer alan huntingtin geninde (HTT) trinükleotid CAG tekrarının kararsız artışı sonucu ortaya çıkar. 27-35 CAG tekrarında birey normaldir ancak stabil olmayan alel olarak kabul edilir. 36-39 tekrarlı alel düşük penetranslı hastalık riskine sahipken, 40 ve üzeri tekrar ise tam penetranslı hastalık gelişimi ile ilişkilidir (6). Bu durum toksik mutant huntingtin (mHTT) proteininin gelişmesine yol açar (1,5). Bu toksik proteinin, striatal nöronlar başta olmak üzere, bazal ganglia, kortikal, talamik ve hipokampal nöronlarda yanlış katlanması ve birikimi sonucunda mitokondri disfonksiyonu, eksitotoksisite, sinaptik ileti bozukluğu ve inflamasyon gelişir ve sonuçta nöronal ölüm meydana gelir (2,7).

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Sonuç olarak, Huntington hastalığının kesin tedavisine yönelik tedavi arayışları giderek artmakta ve hastalığın patogenezine dayalı hale gelmekte ve multidisipliner bir yapıya dönüşmektedir. Bu gelişmeler yakın bir zamanda hastalığın seyrini değiştirebilecek yüz güldürücü çözüm ve tedavilerin mümkün olabileceğine işaret etmektedir.

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BÖLÜM 5

HUZURSUZ BACAK SENDROMU: GÜNCEL TANI VE TEDAVİ

Sinan GÖNÜLLÜ[1]

Huzursuz bacak sendromu (HBS), ilk olarak 1672'de Sir Thomas Willis tarafından tanımlanmıştır. HBS karşı konulamayan bacaklarda huzursuzluk hissi ve bacakları hareket ettirme dürtüsü, genellikle rahatsız edici hislerle birlikte ortaya çıkan klinik bir tablodur. 1945 yılında Nörolog Karl Ekbom, sendromu daha detaylı olarak tanımlamıştır (1).

Uluslararası Huzursuz Bacak Sendromu Çalışma Grubu (IHBSSG) HBS'nin tanı kriterlerini netleştirilmiştir (2). Huzursuz bacaklar sendromu (HBS), bacaklarda derin, iyi tanımlanamayan rahatsızlık hissi veya dizestezi ile şekillenen sensorimotor bir bozukluktur. HBS semptomları uzun istirahat esnasında veya hasta özellikle gece uykuya dalarken veya uyumaya çalışırken ortaya çıkma eğilimindedir. Hareketin başlatılması ile bu duyumsamalar kaybolur. Semptomların sirkadiyen bir ritmi vardır ve geceleri kötüleşir. Genellikle uykudan uyandırır, bu nedenle de kronik uyku bozukluğu ve emosyonel strese yol açmaktadır. Rahatsızlığın tanımlanması güç olabilir; karıncalanma, sürtünme, çekme ve gerilme gibi kavramlar kullanılabilir. Semptomlar genellikle iki taraflıdır ve kollar nadiren tutulur. Bacaklardaki rahatsızlık hissi dinlenme birlikte başlar. Dinlenme süresinin uzaması ile belirginleşir. Semptomlar otururken veya yatarken ortaya çıkabilmektedir. Şikayetlerin ortaya çıkması veya hafiflemesi için özel bir vücut pozisyonu yoktur. Bacaklardaki huzursuzluk hissinin hareketle geçmesi beklenmektedir (2,3).

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ağrısı tedavisinde kullanılır. Metadonun uzun etki süresine sahip olması önemli bir avantaj olmakla birlikte, bu aynı zamanda aşırı doz riskini de beraberinde getirir (18).

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BÖLÜM 6

PARKİNSON PLUS SENDROMLARI'NIN TEDAVİSİ

Serap KÖKOĞLU[1]

Parkinson plus sendromları (PPS), atipik parkinson sendromları olarak da bilinir. İdiyopatik parkinson hastalığı ile örtüşen klinik semptomlara sahip olmalarına rağmen ayırt edici klinik, radyolojik ve patolojik özellikleri olan nörodejeneratif hastalık grubudur (1). Yaygın olarak bilinen PPS'ler; multi sistem atrofi(MSA), kortikobazal sendrom(KBS), progresif supranükleer palsi(PSP) ve lewy cisimcikli demans(LCD)' tır. Bu inceleme parkinson plus sendromlarının tedavisini vurgulamaktadır.

Multi sistem atrofi (MSA)

Multi sistem atrofisi, serebeller, otonom yetmezlik ve parkinsonizmin kombine olabildiği, patolojisinde oligodendrositlerde glial stoplazmik inklüzyon cisimciklerinin saptandığı bir alfa sinükleniopatidir (2). İdiyopatik parkinson hastalığı (PH) ve lewy cicimcikli demans (LCD) patolojisinde de alfa sinükleniopati yer alır. Bu sinükleniopatiden kortikosipinal traktus, serebellum, beyin sapı ve basal ganglionlar etkilenir. Bu lokasyonlarda nöronal kayıp ile sonuçlanır (3).

Epidemiyeloji

MSA yıllık insidansı 0,6/100.000 ile oldukça nadirdir ve prevalans ise PH'dan yaklaşık 10 kat daha azdır (4). Başlangıç yaşı ortalama 54-58 civarı olan erişkin gruptur. Daha genç yaşta görülmesi beklenmemekle beraber nadir vaka şeklinde sunumları mevcuttur. Alfa sinükleniopati olan parkinson hastalığında erkek

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(82)Klonazepam büyük vaka serili çalışmalarda etkinliği kanıtlanmış olup, konfüzyon, uyku apnesini şiddetlendirme gibi yan etki riski nedenli yakın takibi önerilir.Doz aralığı ise 0,5-2 mg /gün olacak şekilde tedaviye yanıtına göre revize edilmedilir (83).

Üriner bozukluklar

Hastalar sıklıkla, üriner inkontinas, artan günlük idrara çıkma sıklığından yakınırlar.Antimuskarinikler bilişsel performans üzerine kötü etkileri nedeni ile kullanılmamalıdır. Mesane düz kaslarının gevşemesi etkisi ile beta-3 adrenerjik reseptörlerinin kognitif yan etkileri daha az olması nedenli önerilir (84).

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BÖLÜM 7

ALZHEİMER HASTALIĞI TEDAVİSİ

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GİRİŞ

Alzheimer hastalığı (AH), hafıza kaybı ve bilişsel gerileme ile ilişkilendirilen ilerleyici bir nörodejeneratif hastalıktır (1). Zaman içinde hastaların zihin ve bellek kapasiteleri azalır, mantıklı düşünme, öğrenme ve iletişim kurabilme yetenekleri giderek bozulur. Hastalık, kişiliği değiştirir ve yargılama yetisini bozar. İleri aşamada, hastalar basit, günlük işlerini bile yerine getiremez ve kendi bakımlarını gerçekleştiremez hale gelirler. Hastalığın göstereceği seyir hastadan hastaya göre değişmektedir (2). Adını bu bozukluğu bir asırdan fazla bir süre önce tanımlayan Alman psikiyatrist Alois Alzheimer'den alan Alzheimer hastalığı ise tüm demans vakalarının %75'ini oluşturan demansın en yaygın nedenidir (3). Yaşayan yaşlı nüfus sayısındaki artış göz önüne alındığında önümüzdeki 30 yıl içinde Alzheimer hastalığında ve benzeri demans olgularının sayılarında 2 kat civarında bir artış beklenmektedir (4).

Alois Alzheimer'ın 1907'de ilk vakayı bildirmesinden bu yana Alzheimer demansı patogenezine ve Alzheimer hastalığı ile ilgili kazanımlar elde edilmesine rağmen hala hastalığı değiştiren tedaviler henüz bulunamamıştır (5).

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Bu merkezlerde aerobik egzersizler, aroma ve müzik terapileri uygulanmaktadır. Hastaların birbiri ile iletişim kurmaları, sosyalleşmeleri, psiko-motor aktivitelerini geliştirecek egzersizler yapmaları sağlanmaktadır. Ayrıca hasta yakınları için bilgilendirme seminerleri düzenlenmektedir.

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BÖLÜM 8

VASKÜLER KOGNİTİF BOZULMADAN DEMANSA: TANIDAN TEDAVİYE GÜNCEL YAKLAŞIMLAR

Arzu ALDEMİR[1]

Giriş

Vasküler demans (VaD), Alzheimer hastalığından sonra en yaygın ikinci demans türü olup, artan prevalansı ve işlevsel yıkım potansiyeli nedeniyle önemli bir küresel sağlık sorunudur. Patofizyolojisinin anlaşılması konusundaki ilerlemelere rağmen, VaD için onaylanmış, hastalığı modifiye edici bir tedavi bulunmamaktadır. Son yıllarda, Alzheimer hastalığına yönelik ajanlar da dâhil olmak üzere farmakolojik tedaviler yanında kök hücre ve nöromodülasyon gibi yenilikçi non-farmakolojik yöntemler üzerine yoğunlaşılmıştır. Bu yazı, VaD'ın temel özellikleri ve güncel tedavi stratejileri üzerine uzman düzeyde bir değerlendirme sunmayı amaçlamaktadır.

Vasküler Demans ve Vasküler Kognitif Bozukluk

Tanım:

Vasküler kognitif bozukluk (VKB), serebrovasküler hastalık veya bozulmuş serebral kan akışı sonucu ortaya çıkan bilişsel bozukluğu ifade eder. VKB, hafif bilişsel bozukluk (HBB) şeklinde olabileceği gibi, birden fazla kognitif alanı etkileyerek günlük yaşam aktivitelerini etkileyecek düzeyde de olabilir ve bu durumda VaD varlığından bahsedilir. VaD, klinik olarak teşhis edilen bir inmeyi takiben ortaya çıkabilir veya inme öyküsü olmaksızın, beyin görüntülemesinde vasküler beyin

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kalmaktadır. Bununla birlikte, NBP gibi yeni farmakolojik ajanlar ile kök hücre ve nöromodülasyon gibi yenilikçi yaklaşımlar, VaD tedavisinde gelecek için önemli potansiyeller taşımaktadır. Tüm bu gelişmeler ışığında, VaD ile mücadelede en etkili stratejinin, bireyselleştirilmiş ve çok boyutlu yaklaşımlarla risk faktörlerinin yönetilmesi, hastalığın ilerleyişini yavaşlatacak yeni moleküllerin araştırılması ve kognitif rehabilitasyon programlarının entegrasyonu olduğu açıktır. Gelecekteki araştırmalar, patofizyolojik mekanizmaların daha derinlemesine anlaşılmasına ve hastalığı gerçekten modifiye edebilecek tedavilerin geliştirilmesine odaklanmalıdır.

Akılda Tutulması Gerekenler

- Vasküler risk faktörlerinin yönetimi, demans gelişimini engellemede en güçlü savunma hattıdır.
- Standardize edilmiş tanı kriterleri, tedavi planlarının başarısını doğrudan etkiler.
- Kolinesteraz inhibitörleri, VaD tedavisinde potansiyel fayda sağlayabilse de, mevcut veriler bu etkinin sınırlı olduğunu ve genellikle eşlik eden Alzheimer patolojisine bağlı olabileceğini göstermektedir.
- Gelişmekte olan yeni tedavilerin umut vaat eden kısa vadeli etkilerine karşın, uzun vadeli güvenlik ve etkinlik profilinin belirlenmesi için kontrollü klinik çalışmalara ihtiyaç vardır.

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BÖLÜM 9

LEWY CİSİMCİKLİ DEMANS TEDAVİSİ

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Demans; kişinin mesleki, ev içi veya sosyal işlevselliğinde bozulmaya neden olan bilişsel düzeyde gerilemenin yaşandığı bir bozukluktur. Genel olarak belirli bir *hastalıktan* ziyade birden fazla olası nedeni bulunan edinilmiş bir *sendrom* olarak karşımıza çıkmaktadır (1). Lewy Cisimcikli Demans (LCD), Alzheimer Hastalığından (AH) sonra demansa neden olduğu kanıtlanmış ikinci en sık görülen nörodejeneratif hastalıktır. Daha yüksek ölüm riski, daha kötü prognoz, daha fazla bakım veren yükü ve daha yüksek sağlık hizmeti maliyetlerinin yanı sıra AH'ye göre daha erken huzurevi yatışı ve daha yüksek hastane yatış oranları ile ilişkili bulunmuştur. Heterojen klinik durumlar ile eş patolojinin varlığı ve spesifik tanı araçlarının eksikliği nedeniyle yanlış ve eksik tanı oranı yüksektir. Klinik olarak teşhis edilen vaka sayısı ile postmortem otopsi sırasında nöropatoloji yoluyla saptanan vaka sayısı arasında önemli bir fark olduğu ve 3 LCD vakasından 1'inin gözden kaçtığı düşünülmektedir (2,3). Klinik tabanlı araştırmalarda LCD, demans hastalarının %4-8'ini oluşturur. Yaş en önemli risk faktörüdür ve vakaların çoğu klinik olarak 70-85 yaşları arasında ortaya çıkmaktadır. Erkeklerde kadınlardan daha yaygındır. LCD'nin etyolojisi tam bilinmemekle birlikte genetik, çevresel faktörler ve yaşlanmaya bağlı değişikliklerin rol oynadığı ve bu konuda daha fazla araştırma gereksinimi olduğu düşünülmektedir (4).

Lewy Cisimcikli Hastalık, Parkinson hastalığı demansı (PHD) ve LCD olmak üzere iki ilişkili klinik tanıyı kapsayıcı bir terimdir. Bu tanılar, Lewy cisimcikleri

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sunmuş, dikkat ve görsel-algısal yeteneklere odaklanan nöropsikolojik batarya ile değerlendirme yapmıştır. Sonuçta dikkatin bazı ölçümlerinde iyileşme olduğu, ancak görsel-algısal performansta değişiklik olmadığı bildirilmiştir.

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BÖLÜM 10

FRONTOTEMPORAL DEMANS TEDAVİSİ

Selçuk ÖZDEMİR[1]

Giriş

Frontotemporal demans (FTD) için kullanılan terminoloji, klinik sendromik sunumu altta yatan moleküler patolojiden ayırt etmek amacıyla belirli terimleri içerir. FTD, klinik sendromu ifade ederken; frontotemporal lobar dejenerasyon (FTLD) ise patolojik değişiklikleri tanımlamak için kullanılan terimdir (1,2). Benzer şekilde, kortikobazal sendrom (KBS) ve ilerleyici supranükleer palsi sendromu (PSP-S) klinik sendromları tanımlarken; kortikobazal dejenerasyon (KBD) ve PSP ise bu sendromlara karşılık gelen patolojik tanımlamalardır.

Bu tanımlamalara rağmen, klinik ve patolojik varlıklar arasındaki ilişkiler karmaşık ve örtüşmelidir; bir kategoriye ait olmak, diğerine dahil olmayı mutlaka dışlamaz. Örneğin, davranışsal varyant FTD (bvFTD) klinik sendromu, KBD veya PSP patolojisiyle ilişkili olabilir (kliniko-anatomik yakınsama(3); yani aynı klinik sendrom, birden fazla patolojik alt yapı ile ilişkili olabilir). Aynı şekilde, KBD patolojisi klinik olarak akıcı olmayan varyant primer progresif afazi (nfvPPA) veya PSP-S olarak da kendini gösterebilir (fenotipik çeşitlilik (3); yani aynı patolojik yapı, birden fazla klinik sendromla ilişkilendirilebilir). FTD'nin tanı kriterleri, hastalığın klinik, genetik, nörogörüntüleme ve patolojik yönlerine ilişkin bilgi birikiminin artmasıyla birlikte zaman içinde birçok kez güncellenmiştir (4,5,6).

FTD klinik sendromları, frontal ve anterior temporal loblarda atrofi ile birlikte gliozis, mikrovakuolizasyon, sinaptik ve nöronal kayıplarla karakterize edilen

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BÖLÜM 11

PARKİNSON HASTALIĞI DEMANSI TEDAVİSİ

Sibel ÇEKİÇ[1]

Epidemiyoloji ve Tanım

Parkinson hastalığı (PH), motor semptomların ön planda olduğu dejeneratif bir hastalık olarak bilinmektedir. Kognitif bozukluklar ise PH'nin önemli motor olmayan bulguları arasındadır. Parkinson hastalığında kognitif bozukluklar, subjektif kognitif gerileme, hafif kognitif bozukluk ve demans gibi geniş bir yelpazede görülebilir (1). Literatürde, PH hastalarında hafif kognitif bozukluğun prevalansı %40 olarak bildirilmektedir (2). Parkinson hastalarında demansın ise kesitsel prevalansı %24–31 arasında belirtilmekte, yıllık insidansı %10 oranında belirtilmekle birlikte yaşa göre bakıldığında %0.4–6.5 arasında değişebildiği vurgulanmaktadır (3). Demans gelişimi ile PH hastalarında mortalite iki kat artmaktadır (4). Mortalitenin artması yanı sıra hastanın özürlülüğünün artması, yaşam kalitesinin bozulması, bakımveren ve toplum için yük oluşturması nedeniyle demansın erken saptanması ve erken tedaviye başlanması önem taşımaktadır (4–6) **.**

Risk Faktörleri ve Etiyoloji

Parkinson hastalığı demansı gelişiminde literatürde bazı risk faktörleri tanımlanmıştır. Demografik olarak, ileri yaş, erkek cinsiyet, eğitim düzeyinin düşük olması, klinik açıdan ise hastanın Hoehn ve Yahr evresinin daha ileri olması, hastalık belirtilerinin daha şiddetli olması, motor belirtilerinin daha genç yaşta

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faktörlerin uyarılması, sinaptik plastisiteyi iyileştirme gibi konuları hedefleyen ve devam etmekte olan klinik ve preklinik çalışmalardan oluşmaktadır. Bu konularda daha fazla ve büyük çaplı araştırmalara ihtiyaç vardır. Özellikle deneysel hayvan modellerinde hastalığın doğal sürecindeki heterojenliği, kronik ve progresif dejenerasyonu tam olarak yansıtmak mümkün olamadığı için bu modellerin geliştirilmesi katkı sağlayabilir. Hastalığın etyopatogenezinin daha net anlaşılabilmesi, evresinin daha kolay saptanabilmesi ve erken tanı yöntemlerinin desteklenmesi, tedavi mekanizmalarını geliştirmek için daha geniş ufuklar açabilir. Hastaların ve bakım verenlerin yaşam kalitesini arttırabilmek, hastaların günlük yaşam aktivitelerine katılımlarını destekleyebilmek için kognitif bozuklukların tedavisinin yanında, eşlik edebilen psikiyatrik ve davranışsal semptomların zamanında saptanıp uygun yaklaşımlarla tedavi edilmesi oldukça önemlidir. Hasta ve yakınlarının konu hakkında detaylı bilgilendirilmeleri, danışmanlık hizmetlerine ve yardımcı olabilecek ilaç dışı destek tedavilerine kolay ulaşabilmeleri tedavinin bütüncüllüğüne katkı sağlayacaktır.

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BÖLÜM 12

MULTİPL SKLEROZ HASTALARINDA ATAK TEDAVİSİ

Ahmet ÖZŞİMŞEK[1]

Giriş

Multipl skleroz (MS), merkez sinir sistemi (MSS)'nin kronik inflamatuar, demiyelinizan ve nörodejeneratif bir hastalığıdır. Heterojen, multifaktöryel genetik geçişin ve çevre etkileşiminin sebep olduğu immün aracılı bir tablo olarak tanımlanabilir [1]. MS atakları (alevlenmeler), yeni nörolojik semptomların ortaya çıkması veya mevcut semptomların kötüleşmesi ile karakterizedir [2].

1. Atak Tanımı ve Klinik Özellikler

MS atağı, en az 24 saat süren ve enfeksiyon gibi diğer nedenlerin dışlandığı nörolojik disfonksiyon epizodu olarak tanımlanır [3]. Ataklar, motor güçsüzlük, duyusal bozukluklar, optik nörit veya beyin sapı semptomlarıyla kendini gösterebilir. Trigeminal nevralji, tonik spazmlar gibi paroksismal belirtilerin 24 saatten uzun sürmesi halinde atak akla gelmelidir. Psödo-atak (yalancı atak), gerçek bir MS alevlenmesi olmaksızın ortaya çıkan ve MS semptomlarına benzeyen geçici nörolojik şikayetlerdir. Bu durum, atak kriterlerini karşılamaz ve altta yatan başka tetikleyicilerle ilişkilidir [4]. Psödo-atağın temel özellikleri; 24 saatten kısa sürmesi (genellikle birkaç saat ile bir gün arası), Manyetik Rezonans Görüntüleme'de (MRG) yeni bir lezyon veya kontrast tutulumunun olmaması, enfeksiyon, stres, aşırı sıcak (Uhthoff fenomeni), yorgunluk veya hormonal değişiklikler gibi tetikleyicilerle ilişkili olması ve nörolojik muayenede objektif

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2.4. IVIG

MS ataklarının tedavisinde IVIG kullanımının etkinliğine yönelik kanıta dayalı veri yoktur [12].

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BÖLÜM 13

RELAPSİNG- REMİTTİNG MULTİPL SKLEROZDA 1. BASAMAK ENJEKTABL İMMÜNMODÜLATÖR İLAÇLAR İLE TEDAVİ

Ramazan AKAY[1]

Giriş

Multipl skleroz (MS), merkezi sinir sisteminin (CNS) kronik inflamatuar, demiyelinizan, nörodejeneratif ve otoimmün bir hastalığıdır (1). MS belirtileri genellikle 20 ile 50 yaşları arasındaki yetişkinlerde ortaya çıkar. Kadınlarda erkeklere oranla daha sık görülmektedir. Bu belirtiler arasında duyusal kayıplar, görme bozuklukları, motor zayıflık, ataksi, yorgunluk, üriner fonksiyon bozuklukları, depresyon ve bilişsel bozukluklar yer almaktadır.

MS, bireylerin günlük yaşam kalitesini önemli ölçüde etkileyen karmaşık bir hastalıktır (2). Genç yetişkinleri daha fazla etkileyen bir hastalık olan MS, dört farklı klinik formda ortaya çıkabilir: Relapsing-Remitting MS (RRMS), Sekonder-Progresif MS (SPMS), Primer-Progresif MS (PPMS) ve Progresif-Relapsing MS (PRMS). MS hastalarının yaklaşık %85 oranında RRMS ile başvurduğu görülmektedir (3). RRMS, hastaların günlük yaşamlarını etkileyen episodik akut nörolojik olaylarla karakterizedir; iyileşme süreci günler ile haftalar arasında değişkenlik gösterebilir ve tam ya da kısmi olabilir (4).

MS, çevresel faktörler, genetik yatkınlık ve viral enfeksiyonlar gibi etmenlerin rol oynadığı çok faktörlü bir hastalıktır. Bu durum, hastalığın etyolojisini anlamada zorluklar yaratmakta ve bireyler arasında farklı klinik seyrin gözlemlenmesine neden olmaktadır. MS'nin çok çeşitli nedenleri olduğu düşünüldüğünde, hastalığın yönetimi için bireyselleştirilmiş tedavi yaklaşımlarının önemi artmaktadır.

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GA, RRMS hastalarında relaps oranını azaltarak ve MRI hastalık aktivitesini düşürerek önemli bir etki göstermiştir (21). MS kadınlarda erkeklere göre daha sık görüldüğünden bu ilaçların gebelikteki kullanımı önem arz etmektedir. Gebelik süresince kullanılması gerekirse hasta ile görüşülerek ortak karar alınması uygundur. Kimyasal özellikler ve düşük oral absorpsiyon nedeniyle yenidoğanların/bebeklerin anne sütü yoluyla GA'ya maruz kalması ihmal edilebileceği gösterildiğinden GA, emzirme döneminde kullanılabilir (22)

Yan etkiler arasında enjeksiyon yeri reaksiyonları, enjeksiyon sonrası göğüste sıkışma hissi, nefes darlığı, anksiyete ve kızarma gibi kendiliğinden düzelen izole enjeksiyon sonrası reaksiyonlar gözlemlenebilir. Glatiramer asetat kullanımıyla ilişkili olarak nadir durumlarda trombositopeni meydana gelebilir. Ayrıca, glatiramer asetat tedavisi sırasında karaciğer yetmezliği dahil olmak üzere karaciğer problemlerinin kötüleşmesi de nadiren görülmektedir. (23)

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BÖLÜM 14

MULTİPL SKLEROZDA ORAL TEDAVİLER

Hatice TOSUN KAYA[1]

1. Giriş

Multipl skleroz (MS) ile ilgili tedaviler son yıllarda önemli gelişmeler göstermiştir. Kullanıma başlanıldığı yıl olan 1993 yılından beri MS için ilk terapötik ilaç tedavisi olan interferon (IFN), hastalığın doğal seyrini etkili bir şekilde değiştirmiştir. Bu gelişmenin ardından yeni tedavi yaklaşımlarının ortaya çıkarılması hızlanmıştır. Hem hekimlere hem de hastalara hastalığı yönetmede daha fazla seçenek imkanı sağlanmıştır (1, 2).

Klasik MS tedavisinde birinci basamakta enjekte edilebilir ilaçlar kullanılabilmektedir. Bu ilaçların yaygın kullanımına rağmen, efektiflik ve terapötik uyum açısından bazı kaygılar bulunmaktadır. İnterferon, MS için ilk kullanılan ilaç olup hala yaygın olarak kullanılmaktadır. Kullanım sonrası enjeksiyon bölgesinde gerçekleşen reaksiyonlar, grip benzeri semptomlar, karaciğer işlev bozuklukları nedenli oluşan ilaç etkinliğini azaltan antikor oluşturma riski en çok karşılaşılan sorunlardır. Lokal enjeksiyon bölgesi reaksiyonlarını ve geçici sistemik enjeksiyon reaksiyonlarını azaltmak için glatiramer asetat (GA) kullanılabilmektedir. Enjekte edilebilir ilaçlar nüks oranını önemli derecede azaltmasına rağmen daha etkili tedavi yöntemlerine ihtiyaç olduğu görülmektedir. MS tedavisinde önemli terapötik ilerlemeler günümüzde onaylanmış yeni oral tedaviler üzerinden gelişim göstermektedir. Yapılan çalışmalarda oral uygulama yöntemleri hastaların memnuniyetini arttırmaktadır. Fakat enjekte edilebilir ilaçlar ile karşılaştırıldığında tolerans ve güvenlik faktörlerinin detaylı bir şekilde

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5.4. Yan Etkileri

Kladribinin en yaygın yan etkileri baş ağrısı, lenfopeni, nazofarenjit ve üst solunum yolu enfeksiyonudur. İlaç alan gruplarda malignite tespit edilirken; plasebo grubunda hiçbir kanser olgusuna rastlanmaması 2011 yılında yapılan başvurunun kabul edilmemesinin en önemli nedeni olabilir. (3).

CLARITY ve ORACLE MS çalışmasının bir meta-analizinde, neoplazmlar için artmış bir risk gösterilememiştir. Kladribin gruplarında plaseboya göre %1,6 daha fazla ciddi enfeksiyon görülmüştür. Plasebo grubunda herpes görülmemiştir, ancak kladribin grubunun %2,3'ünde görülmüştür. Plasebo grubundaki hastaların %1,8'i ve kladribin grubundaki hastaların %21,6'sı lenfopeni göstermiştir (3, 39).

Her doz öncesi gebelik testi yapılması önerilir. Son dozdan itibaren altı ay boyunca doğum kontrolü yapılmalıdır (3).

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BÖLÜM 15

MULTİPLE SKLEROZDA MONOKLONAL ANTİKORLAR

Derya BAYRAK[1]

Giriş

Multiple sklerozis (MS),santral sinir sistemi (SSS) ni tutan inflamatuar bir hastalıktır (1).MS'de nöroinflamasyonunun tetikleyici nedeni henüz kesin belli olmamakla birlikte hastalığın oluşumunda T ve B lenfosit aracılı otoimmün bir yanıt olduğuna inanılmaktadır (2).

MS'in en sık görülen klinik formu,relapsing remitting multiple sklerozis (RRMS) dir.RRMS,relaps adı verilen değişen nörolojik fonksyon bozuklukları dönemleri ve remisyon dediğimiz yeni nörolojik defisit olmaksızın klinik stabilizasyon dönemleri ile karakterizedir (3).Relapslardan bağımsız olarak nörolojik fonksyonlarda sinsi bir kötüleşme olması durumunda ise sekonder progresif form dediğimiz klinik gelişir (4).MS hastalarının yaklaşık olarak %10'undan azında ise hastalığın başlangıcından itibaren relapslar olmaksızın devamlı kötüleşmelerle seyreden primer progresif tip MS dediğimiz kinik tablo görülmektedir(1).

Takiplerde yeni relapslar,manyetik rezonans görüntüleme(MRG) de yeni gadolinyum tutan lezyonlar ve / veya T2 sekansında yeni ve/veya genişleyen T2 lezyonların varlığı bize hastalık aktivitesinin devam ettiğini ve SSS de aktif inflamasyon durumunu göstermektedir (5).Hastalık sürecinde bu durumları iyi belirlemiş olmak bize tedavinin başlatılmasında ve tedavi seçeneklerinin sıralanmasında rehberlik etmektedir (6).Son yıllarda hastalık aktivitesinin etkili

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özgü geniş bir bağlanma bölgesi olan bir IgG1 kappa monoklonal antikorudur. Fc bölgesinde fruktoz miktarı düşük olan bir gluko mühendislik ürünüdür. Ublituximabın bu özellliği immün hücrelerdeki FcyIIIa antijenlerine olan afinitesini arttırmakta olup özellikle CD20 lerin sayısında belirgin azalma ve antikor aracılı hücresel sitototoksisitede (ADCC) artmaya sebep olmaktadır. Bu sayede ublituximabın CD20 pozitif B hücrelerini azaltmada diğer CD20 monoklonal antiorlara kıyasla daha güçlü bir etkiye sahip olduğu gösterilmiştir. Tedavi şeması başlangıçta ilk gün 1x150 mg,2 hafta sonra 1x450 mg olup sonrasında 6 ayda bir tekrarlanan 1x450 mg infüzyon şeklindedir (110-111).Faz III çalışmalar olan ULTIMATE I ve ULTIMATE II çalışmalarında ublituximabın teriflunomide kıyasla ilaç etkinliği karşılaştırılmış,ublituximab alan hastalarda relaps hızının daha düşük,MRG'da yeni T2 lezyon veya gadolınyum tutan lezyon oluşumunun daha az olduğu saptanmıştır.96 haftalık takip sonunda ublituximab kullanan hastaların %10 unda en sık infüzyon ile ilişkili reaksyonlar,baş ağrısı,nazofarenjit,ateş bulantı gibi hafif yan etkiler olurken yine yaklaşık %10'unda ensık pnömoni olmak üzere ciddi yan etkiler görülmüştür.ULTIMATE I'de neoplazi gelişen hiç hasta bulunmazken ULTIMATE II'de 2 hastada endometrial neoplazi gelişmiştir (111).

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BÖLÜM 16

MULTİPL SKLEROZDA İMMÜNSUPRESİF TEDAVİLER

Hikmet SAÇMACI[1]

Giriş

Multipl skleroz (MS), genç erişkinlerde sakatlığın önde gelen nedenlerinden biri olup inflamatuar, demyelinizan ve aksonal kayıp ile seyreden santral sinir sistemi hastalığıdır (1). MS otoimmün bir hastalık olarak kabul edilir; ancak kesin patofizyolojisi hala belirsizdir. Patofizyolojisinde bağışıklık aracılı mekanizmalar ve intratekal antikor üretimi merkezi bir rol oynasa da spesifik bir antijen hedefi henüz tanımlanmamıştır (2). Sonuçta bağışıklık sistemi ve otoimmünite arasındaki intrinsik yolak belirli risk faktörleri dahilinde artan insidans ile hasta aleyhine bozulmaktadır.

Patofizyolojik olarak antijen sunan hücrelerin; naif T hücrelerinin, düzenleyici ve anerjik T hücrelerine dönüşüm aşamasında bozukluk olduğu genel olarak kabul edilen görüştür (3). Antijenleri T hücrelerine sunma aşamasında bozulma ve antikor üreten plazma hücrelerini ifade etme aşamasında, B hücrelerinin anormal proinflamatuar sitokinler ürettiği bilinmektedir (4). Tedavi açısından bakıldığında ise hastalık gelişimini hızlandıran T helper 1 (Th1) ve Th17'yi baskılamanın, hastalığın progresyonunu azalttığı bilinmektedir (5). Ancak bazı MS lezyonları, klinik nükslerin yokluğunda bile, T ve B hücrelerinin devam eden aktivasyonuna ve uyarılmasına yol açan kronik aktif lezyon haline dönüşmektedir (4). Bu yüzden hastalık modifiye edici tedavilerin yetersiz kaldığı bazı MS'li bireylerde veya henüz yeterli tedavi olanaklarının olmadığı dönemlerde ilkin

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progresyonunda azalma göstermemiştir (79). Klinik verilerin anlamlılık kazanması için çalışmaların literatür kapsamına girmesi gerekmektedir.

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BÖLÜM 17

MULTIPLE SKLEROZDA IVIG VE PLAZMAFEREZ TEDAVİSİ

Hilal ÇAĞLAR[1]

IVIG Tedavisi

Multipl skleroz (MS), bağışıklık aracılı demiyelinizasyon ve akson kaybı ile karakterize, merkezi sinir sisteminde kronik bir hastalıktır. Hastaların çoğunda, ensefalitojenik T hücreleri ve makrofajlar tarafından indüklenen ve demiyelinizasyona yol açan T hücresi aracılı inflamasyon baskın patojenik mekanizmadır. Bununla birlikte, en azından bazı hastalarda, demiyelinizan antikorlar ve kompleman aktivasyonu patogenetik olarak önemli olabilir. Hastaların küçük bir kısmında, demiyelinizasyon birincil bir oligodendrosit bozukluğundan kaynaklanır. Akut MS atağının erken bir özelliği, bağışıklık medyatörlerinin merkezi sinir sistemine sızmasına neden olan kan-beyin bariyerinin bozulmasıdır. Pro-inflamatuar sitokinlerin salınımı, oligodendrosit yüzey proteinlerine ve miyelin proteinlerine karşı yönlendirilen bağışıklık tepkisinde rol oynar ve bu da daha sonra makrofajlar tarafından miyelinin bozulmasına ve fagositozuna ve aksonların hasarına yol açar. Aktif MS'li hastalarda, düzenleyici T hücrelerinin sayısında azalma ve aktive olmuş proinflamatuar CD4+ hücrelerinin sayısında artış ve beyin omurilik sıvısındaki (BOS) miyelin proteinlerine karşı IgG antikorları üreten B hücrelerinin sayısında artış dahil olmak üzere çeşitli immünolojik bozukluklar gözlemlenmiştir (Brück ve ark., 1997, Hafler ve ark., 1989, Lucchinetti Claudia ve ark., 2000, Lucchinetti Claudia F ve ark., 1996, Storch Maria ve Lassmann, 1997, Storch Maria K ve ark., 1998)

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TPD işlemi, deneyimli sağlık kuruluşlarında uygulandığında genellikle güvenli bir yöntem olarak kabul edilir ve komplikasyonlar çoğunlukla hafif şiddette seyreder. Ciddi reaksiyonlar, örneğin anafilaktik yanıtlar, oldukça nadir görülür.

Yapılan değerlendirmelere göre, ciddi komplikasyon riski yaklaşık %4,6 iken, işlemle ilişkili ölüm oranı %0,03 ila %0,05 arasında değişmektedir. Ölümle sonuçlanabilecek komplikasyonlar arasında en yaygın olanları; hipokalsemiye bağlı gelişen kalp ritim bozuklukları (aritmiler), ani solunum yetmezliği ve akciğer ödemidir.

Daha az sıklıkla karşılaşılan ancak ölümcül olabilen diğer durumlar ise şunlardır: Anafilaktik reaksiyonlar, damar erişimine bağlı komplikasyonlar, hepatit gibi bulaşıcı hastalıklar, sepsis ve tromboz gelişimi.

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BÖLÜM 18

MULTİPL SKLEROZDA KÖK HÜCRE TEDAVİSİ

Ömer Faruk ALACAN[1]

Giriş

Multipl skleroz (MS), merkezi sinir sisteminin (MSS) kronik inflamatuar, otoimmün ve nörodejeneratif bir hastalığıdır. Otoreaktif T hücrelerinin miyelin kılıfına saldırması ve sonunda fonksiyonel nörolojik sakatlığa yol açan endojen remiyelinizasyon başarısızlığı ile indüklenen demiyelinizasyon ve nöronal kayıp ile karakterizedir. Son kanıtlar, MS nükslerinin genetik bir arka planda viral enfeksiyonlar gibi çevresel ve ekzojen tetikleyiciler tarafından indüklendiğini gösterse de çok karmaşık patogenezi tam olarak anlaşılmamıştır. Bu nedenle, MS'in mevcut immünosüpresyona dayalı tedavilerinin etkinliği çok düşüktür ve fingolimod ve dimetil fumarat gibi ortaya çıkan hastalığı değiştiren immünomodülatör ajanlar ilerleyici nörodejeneratif süreci durduramaz (1). Bu nedenle, nöronal hücre kaybını ve remiyelinizasyon başarısızlığını aşmayı ve endojen miyelin onarım kapasitesini artırmayı amaçlayan hücre replasman tedavisi yaklaşımı alternatif bir tedavi seçeneği olarak kabul edilir. MS'in deneysel otoimmün ensefalomiyelit modelini kullanan çok çeşitli klinik öncesi çalışmalar, yakın zamanda mezenkimal kök hücreler (MSC'ler), nöral öncül ve kök hücreler ve indüklenmiş pluripotent kök hücreler dahil olmak üzere farklı kökenlere sahip aşılanmış hücrelerin MSS lezyonlarını onarma ve işlevsel nörolojik eksiklikleri iyileştirme yeteneğine sahip olduğunu göstermiştir. Hastalara periferik uygulama avantajıyla devam eden otolog hematopoietik kök hücre tedavisi çalışmalarının

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BÖLÜM 19

NÖROMYELİTİS OPTİKA VE TEDAVİSİ

Şeyma BENLİ[1]

Giriş

Nöromyelitis optika spektrum bozukluğu (NMOSD), merkezi sinir sisteminin (MSS) nadir görülen antikor aracılı bir hastalığıdır. Ağırlıklı olarak optik sinirleri, spinal kordu ve daha az sıklıkla beyin sapını etkileyen ve akut optik nörit, miyelit ve beyin sapı ensefaliti ataklarına neden olan MSS'nin enflamatuar bozukluklarını ifade etmek için kullanılır (1).

Neuromyelitis optica terimi ilk olarak 1894'te Eugène Devic ve doktora öğrencisi Fernand Gault tarafından tanımlanmıştır. Bu nedenle hastalık daha önce Devic hastalığı olarak anılmıştır. Yakın zamana kadar neuromyelitis optica'nın ayrı bir hastalık mı yoksa sadece daha şiddetli bir "optiko-spinal" multipl skleroz (MS) formu mu olduğu belirsizdi. 2004 yılında antijenik hedef olan aquaporin-4 su kanalı tanımlandı ve iki hastalık AQP4-Abs'in tespiti ile güvenilir bir şekilde ayırt edilebilir hale gelmiştir (2).

NMOSD'nin prevalansı ~0,5-4/100.000'dir ve belirli ırksal gruplarda 10/100.000'e kadar çıkabilir. Bununla birlikte prevalans ekvator bölgesinde 1-2/100.000, Kanada ve Avrupa'nın kuzey kesiminde 150–200/100.000 arasında değişiklik gösterebilmektedir (3). Beyaz ırkta, yıllık NMOSD insidansının genellikle 0,5-0,8/milyon civarında olduğu bildirilmektedir (4,5). Prevalansı daha yüksek olan popülasyonlarda insidans da daha yüksektir. Örneğin, Martinik'teki siyahlar 11,5/100.000'lik yüksek bir prevalansa sahiptir ve insidansın da 7,3/

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diğer dozunun ise nakil sonrası 1. günde uygulanmasının faydalı olabileceği belirtilmiştir.

Toplam 39 NMOSD hastasını içeren 9 çalışmanın meta-analizi, otolog HSCT sonrasında %69 oranında progresyonsuz sağkalım bildirmiştir. Ayrıca, PRISMA ilkelerine uygun başka bir meta-analiz, orta yoğunluklu hazırlık rejimleriyle iyi bir güvenlik profili ortaya koymuştur. HSCT'nin etkisi genellikle hızlı başlamakta olup, allojenik HSCT'den farklı olarak greft-versus-host hastalığı riski taşımamaktadır. Bununla birlikte, prosedür ciddi enfeksiyonlar ve uzun süreli immünsüpresyon riski ile ilişkilidir.

NMOSD'de otolog HSCT'nin uzun dönem etkinliği konusunda veriler oldukça sınırlıdır. Dahası, günümüzde mevcut olan güçlü immünomodülatör ajanlarla kıyaslandığında, HSCT henüz randomize ve aktif kontrollü klinik çalışmalarda değerlendirilmemiştir. Bu nedenle, HSCT yalnızca diğer tedavilere yanıt vermeyen, seçilmiş refrakter NMOSD vakalarında düşünülebilir.

Ek olarak, seçilmiş hastalarda allojenik HSCT, otolog ve allojenik mezenkimal kök hücre nakli ile peptid-yüklü tolerojenik dendritik hücre nakli gibi deneysel hücresel tedavi yaklaşımları da araştırılmaktadır (49).

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BÖLÜM 20

AKUT DİSSEMİNAN ENSEFALOMYELİT (ADEM) TEDAVİSİ

İnci MÜLKEM ŞİMŞEK[1]

Giriş

Akut disseminan ensefalomiyelit (ADEM); santral sinir sistemini (SSS) etkileyen, akut, polifokal, inflamatuar otoimmün bir hastalıktır. Genellikle çocukluk ve genç erişkinlik döneminde görülür.Beyin, omurilik ve zaman zaman da optik sinirde inflamasyon sonucu ortaya çıkan demiyelinizasyon ile karakterizedir. Genellikle öncesinde geçirilmiş bir enfeksiyon veya aşılama öyküsü bulunmaktadır. (1) En sık ilişkilendirilen organizmalar arasında sitomegalovirüs, Epstein-Barr virüsü, herpes simpleks virüsü, insan herpes virüs-6, influenza virüsü, hepatit A, insan immün yetmezlik virüsü ve Mycoplasma pneumonia yer alır; ancak olguların çoğunda neden olan patojen saptanamaz. Bakteriyel enfeksiyonlar arasında Leptospira, beta-hemolitik streptokoklar ve Borrelia burgdorferi bulunmaktadır.(2,3) Aşı programlarının geliştirilmesinden önce, ADEM en sık kızamık ile ilişkilendirilirdi. Günümüzde ADEM daha çok gastrointestinal veya solunum yolu viral enfeksiyonları ile ilişkilidir. ADEM, erişkinlerde ve çocuklarda aşılama sonrası yaklaşık 8 ila 21 gün içinde görülebilir. ADEM ile en sık ilişkilendirilen aşı kuduz aşısıdır. Daha az sıklıkla ilişkilendirilen diğer aşılar arasında kızamık, boğmaca, tetanoz, influenza, hepatit B, difteri, kızamıkçık, pnömokok, suçiçeği, çiçek hastalığı, insan papilloma virüsü ve çocuk felci (poliomiyelit) aşıları yer alır. Aşılama sonrası ADEM görülme sıklığı son yıllarda azalmıştır; bu durum muhtemelen aşı üretiminde kullanılan yöntemlerin değişmesiyle ilişkilidir.(4)

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(MOGAD) tedavisi halen zordur. Güncel bir Avrupa işbirliği çalışmasında, özellikle intravenöz immünoglobulinler olmak üzere B hücresi hedefli tedavilerin nüks sıklığını azalttığı gösterilmiştir(26).

Sonuç

ADEM tedavisinde kullanılan mevcut immünosupresif ve immünomodülatör ajanlar, belirli vakalarda etkili olsa da, bu tedavilere dair randomize kontrollü çalışmaların eksikliği tedavi yaklaşımlarının standardizasyonunu engellemektedir. Ayrıca, ADEM sonrası ortaya çıkabilecek bilişsel, davranışsal ve motor bozuklukların uzun dönemli izlenmesi, hastaların yaşam kalitesini artırmak açısından önemlidir. Bu doğrultuda, multidisipliner rehabilitasyon yaklaşımları ve nöropsikolojik destek programlarının oluşturulması gerekmektedir.

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BÖLÜM 21

IMMUNGLOBULİN-G4 İLE İLGİLİ NÖROLOJİK HASTALIKLARIN TEDAVİSİ

Hatice BARUT[1]

1.Giriş

Immünglobulin-G4 ilişkili hastalık (IgG4-İH), tümör benzeri kitle, lenfoplazmositik hücre infiltrasyonu, storiform fibrozis ve genellikle IgG4 seviyelerinin serumda artmış olduğu multisistemik bir hastalıktır. Çoğunlukla relapsing–remitting formda seyreder ve eş zamanlı ya da ardışık şekilde, birçok organda tutulum yapabilir. 2003 yılında ortak histopatolojik özellikler gösterdiği fark edilen; otoimmun pankreatit tip 1, mikulicz sendromu(sialadenit, dakroadenit), orbital psödotümör, riedel tiroidit, retroperitoneal fibrozis(ormond hastalığı) , küttner sendromu, multifokal fibrosklerozis , mediastinal fibrozis, periaortitis ve periarteritis, idiyopatik hipokomplementemik tubulointerstisyel nefrit, inflamatuvar aortik anevrizma, inflamatuvar psödotümör gibi hastalıklar IgG4-İH çatısı altında toplanmıştır (1). Tanıda ve dolayısıyla tedavide gecikmeler görülmesinin nedeni benign tümoral lezyonlar sanılan bir hastalık olarak algılanmasıdır (2). IgG4-İH, kalıcı organ hasarının engellenmesi için erken tanı konulması gereken multisistemik bir hastalık olup en sık görülen nörolojik belirtiler hipertrofik pakimeningit ve hipofizittir.

2.Epidemiyoloji

Orta ve ileri yaşta daha sık görülen bu hastalıkla ilgili farkındalığın günbegün artmasından ötürü prevalansı henüz net değildir. Japonya'da 2007-2016 yılları arasında yapılan bir araştırmada başlangıçta 100.000'de 0.8 olan prevalans,

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İmmünsüpresif Ajanlar

Serum IgG4 düzeyi yüksekliği 5 kattan fazlaysa, 3 ve daha fazla organ tutulumu varsa, serum IgE ve eozinofil seviyesinde artış gibi relaps olasılığının fazla olduğu ileri yaşlı, diabetes mellitus, hipertansiyon ve osteoporoz gibi komorbiditeleri olan vakalarda mikofenolat mofetil , leflunomid, siklofosfamid gibi immunsupresif ajanlar ile kombine tedavi düşünülmelidir (30). Azatioprin, metotreksat , 6-merkaptopürin, takrolimus da kullanılmıştır (38, 34, 39, 41).

Rituksimab

IgG4-İH tedavisinde en sık kullanılan biyolojik ajan olan rituksimab verilen hastaların %67-83 kadarında remisyon gözlenmiş bununla birlikte rituksimab alan hastalarda kümülatif steroid dozunun daha az olduğu görülmüştür(30). Organdaki fibrozisin B hücrelerinin sayısının azalmasıyla beraber de düzeldiği görülmüştür. Romatoloji pratiklerine göre 2 hafta arayla uygulanan iki adet 1 gramlık intravenöz infüzyon çoğunlukla uygulanan yaklaşımdır. 2 mg/kg/gün azatiyoprin veya 2.5 g/gün doza kadar mikofenolat mofetil gibi immünsüpresif ajanlar rituksimabın verilemediği durumlarda tavsiye edilmektedir (40).

Kortikostreoidlere dirençli olan yada nüks saptanan IgG4-İH hastalarında, B hücrelerini azaltan rituksimab uygulanabilir (42, 43, 41,44,45). Rituksimab ile tedavi edilen vakalarda klinik, radyolojik ve serolojik olarak hızlı düzelmeler gözlemlenmiş; böylece steroidin hızlı bir şekilde azaltılması mümkün olmuş ve serum IgG4 seviyelerinde gözle görülür bir azalma sağlanmıştır (43, 41, 44, 45).

Cerrahi

Medikal tedavinin yanında, paraparezi gibi devam eden nörolojik semptomları olan özellikle spinal pakimenenjit hastalarında laminektomi gibi acil cerrahi girişim gerektirebilir. Hatta bu hastaların bazılarının yalnızca cerrahi ile, glukokortikoid tedavisi olmadan tedavi edildiği bildirilmiştir (46,47).

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BÖLÜM 22

NÖROSARKOİDOZ VE TEDAVİSİ

Mehmet Ertan TEMİR[1]

Sarkoidoz, etyolojisi kesin olarak bilinmeyen, enfeksiyöz veya toksik herhangi bir tetikleyici olmadan birçok farklı sistemi etkileyebilen, histopatolojik olarak non-kazeifiye granülomlarla karakterize bir hastalıktır. (1). Hastalık hemen hemen her sistemi etkileyebilir. Akciğer tutulumu en yaygın görülen formudur. Akciğerlerin yanı sıra gözleri, lenf düğümlerini ve cildi de etkileyebilir. Sarkoidoz, asemptomatik vakalardan şiddetli çoklu organ disfonksiyonuna kadar değişen, oldukça değişken bir klinik seyir gösterebilir (2).

Mevcut araştırmalara göre, en yüksek insidans Kuzey Avrupa ve Afrika kıtasının yakın bölgelerindeki popülasyonlarda görülür. Kadınlarda hafif olarak daha yüksek oranda görüldüğünü bildiren çalışmalar vardır (3,4).

Nörosarkoidoz (NS), sarkoid granülomların merkezi veya periferik sinir sistemini etkilemesi olarak tanımlanabilir. Sistemik sarkoidoz hastalarında NS oranı %5-10 olmasına rağmen, otopsi çalışmaları bu oranın daha yüksek olduğunu ve subklinik nörolojik tutulumun %25'e kadar çıkabileceğini göstermektedir (5). Nörolojik tutulumun, başka bir deyişle nörosarkoidozun morbidite ve mortalite için önemli bir nedensel faktör olduğunu söylemek doğru olacaktır (6).

Klinik özellikler

NS'nin klinik belirtileri çok çeşitlidir. NS, çeşitli nörolojik bozuklukları taklit eder, bu durum tanıyı zorlaştırır ve tedavide gecikmelere neden olur. Belirtiler, kraniyal nöropatiler ve menenjitten, kitle lezyonlarına ve bilişsel bozukluğa kadar değişebilir (7).

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1-2 haftada bir 40 mg olarak kullanılır ve subkutan uygulama avantajı sunar (52-54). Tedavinin birincil amacı remisyondur, ancak bu özellikle şiddetli başlangıçlı hastalık vakalarında birkaç yıllık tedavi gerektirebilir. Nörosarkoidoz için TNF inhibitörlerinin kesilmesi durumunda, hastayı klinik olarak izlemek ve MRG ile değerlendirme yapmak önemlidir. İlaç kesildikten sonra üç ile altı ay içinde nüks görülebilir (55).

Hem IFX hem de ADA plasentaya geçer. Ancak, bu ilaçların kullanımı hamileliğin ilk ve ikinci trimesterinde güvenli kabul edilir. IFX ve ADA'nın üçüncü trimesterde kesilmesi önerilir. IFX ve ADA büyük protein molekülleri olduğundan, emzirilen bir çocuğun kan dolaşımında önemli seviyelere ulaşması olası değildir. Bu nedenle, TNF inhibitörleri alan hastaların emzirmeye devam etmeleri güvenli kabul edilir (50).

CD20+ B hücrelerini hedef alan monoklonal antikor olan rituksimab, tedaviye yanıt vermeyen nörosarkoidoz hastalarının tedavisinde potansiyel bir tedavi olarak kullanılabilir (53,56).

Büyük lezyonları olan hastalarda radyoterapi ve cerrahi müdahale gibi seçenekler düşünülebilir. Radyoterapi, tıbbi tedaviye dirençli hastalarda kullanılabilir (57).

Sarkoidoz tedavisi genel olarak klinisyenler ve hastalar için karmaşık ve standartlaştırılmamış bir süreçtir. Sonuç olarak, organ tutulumu, ilaç toksisitesi ve bireysel tolerans gibi faktörleri göz önünde bulundurarak her hasta için en etkili tedaviyi belirlemek ve hastaya özgü bir yaklaşım zorunludur.

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BÖLÜM 23

NÖRO-BEHÇET HASTALIĞI GÜNCEL TEDAVİ YAKLAŞIMLARI

Sezgin KEHAYA[1]

Behçet Hastalığı

Tanım ve Epidemiyoloji

Behçet hastalığı, tekrarlayan oral aftlar, genital ülserler, üveit, deri lezyonları ve vasküler, gastrointestinal, nörolojik tutulum gibi sistemik bulgularla karakterize kronik inflamatuar bir hastalıktır. Etiyolojisi tam olarak aydınlatılamamış olsa da otoinflamatuar ve otoimmün mekanizmaların rol oynadığı düşünülmektedir (1). HLA B-51 gibi genetik yatkınlık, nötrofil aktivasyonu, hücresel ve humoral bağışıklık ve çeşitli antijen sunumları ile patofiziyolojisi açıklanmaya çalışılmıştır.

Behçet sendromu, en sık Türkiye'de (her 100.000 kişide 80 ila 370 vaka) olmak üzere, Japonya, Kore, Çin, İran, Irak ve Suudi Arabistan gibi eski İpek Yolu üzerindeki ülkelerde daha yaygındır (2,3). Bu bölgelerden gelen göçmen ve mültecilerde de hastalık riski artmaktadır. Avrupa ve ABD'de daha nadir görülse de, etnik kökene bağlı farklılıklar vardır; örneğin Paris'te (prevalansı 100.000 kişide 7.1 olup, Avrupalı kökenlilerde 2.4, Kuzey Afrikalılarda 34.6, Asyalılarda ise 17.5) Kuzey Afrikalı kökenlilerde prevalans daha yüksektir (4). Genellikle 20-40 yaş arası genç erişkinleri etkiler, ancak nadiren çocuklarda da görülebilir. Erkeklerde ve Orta/Uzak Doğu kökenli bireylerde hastalık daha ağır seyreder. Çoğu vaka sporadik olsa da, ailevi kümelenme ve ardışık nesillerde daha erken başlangıç (antisipasyon) görülebilir (5,6).

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Tablo 2: Kronik Progresif Nöro Behçet yaklaşımı algoritması. (Devamı)		
	Metotreksat (MTX) 16 mg/hafta	
	BOS IL-6 <17 pg/mL	
Evet		Hayır
MTX'e devam		İnfliksimab (IFX) ekle
		IFX sonrası BOS IL-6 <17 pg/mL
Evet		Hayır
IFX'e devam		Diğer biyolojik ajanlara geç

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BÖLÜM 24

İSKEMİK İNME TEDAVİSİ

Yusuf İNANÇ[1]
Burak AKPEK[2]

1. Akut İskemik İnme Yaklaşımı ve Tedavisi

İskemik stroke, beyin atardamarlarının tromboz ya da bir pıhtı nedeniyle tıkanması sonucu beyin dokusunun yeterli kan ve oksijen alamamasına bağlı olarak gelişen, ani başlayan kısmi veya yaygın beyin faaliyetlerinin kaybıyla seyreden klinik bir tablodur (1). Tüm inmelerin yaklaşık %85'i iskemik türdedir (2). Bu bölümde iskemik inme tedavisinin aşamaları, kanıta dayalı yaklaşımlar, güncel tedavi protokolleri ve ülkemizdeki uygulamalar şekil ve tablolarla detaylandırılmıştır.

İskemik stroke hastaları bir nöroloji uzmanının acil serviste en çok karşılaştığı hasta grubunu oluşturur. Akut iskemik stroke (AİS) ise bu grupta zamanla yarış gerektiren en önemli kısmı oluşturur. 1990'dan önce, AİS tedavisi çok kısıtlıydı ve esasen semptomatik tedavi, sekonder koruma ve rehabilitasyondan ibaretti. Akut iskemik inme tedavisini büyük ölçüde değiştiren ilk yenilik, Federal İlaç Dairesi'nin (FDA) 1995'te IV doku plazminojen aktivatörünü (IV-tPA) onaylaması oldu.(3) IV-tPA, daha gelişmiş klinik çalışmaların endovasküler tedavi (EVT) için sağlam kanıtlar ortaya çıkardığı 2015 yılına dek hemen hemen 20 yıl boyunca tedavinin en temel kısmını oluşturdu.

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Erken Mobilizasyonu Dengeli Uygulayın

İnme sonrası erken dönemde (24–48 saat içinde) mobilizasyona başlanması fonksiyonel iyileşmeyi destekleyebilir ancak AVERT çalışması (A Very Early Rehabilitation Trial) sonuçlarına göre mobilizasyonun süresi ve yoğunluğu dikkatle planlanmalıdır. Yoğun ve uzun süreli erken mobilizasyon, bazı hastalarda olumsuz etkilere neden olabilir.(59)

Multidisipliner Rehabilitasyon Ekibi Kurulmalı

Fizyoterapi, mesleki terapi (ergoterapi) ve logopedi uygulamaları; motor, duyusal ve bilişsel iyileşmede etkilidir. Multidisipliner ekip yaklaşımı, bireysel rehabilitasyon hedeflerinin belirlenmesini ve etkin takibini sağlar (1).

Nöropsikolojik ve Psikososyal Değerlendirme Standart Hale Getirilmeli
İskemik İnme sonrası depresyon ve bilişsel bozukluklar yaygındır. Bu nedenle düzenli taramalar yapılmalı, gerektiğinde psikolojik destek ve tedavi sağlanmalıdır. Bilişsel rehabilitasyon programları ve farmakolojik destek, tedaviye entegre edilmelidir.(2)

Hasta ve Yakınlarına Eğitim ve Sosyal Destek Sağlanmalı

Hasta yakınları, bakım süreci ve komplikasyonlar hakkında bilgilendirilmeli; psikososyal destek sunulmalıdır. Aile eğitimi, hem hastanın iyileşmesine hem de bakım yükünün azaltılmasına katkı sağlar.

Rehabilitasyon Süreklilik Göstermeli

Rehabilitasyon yalnızca hastanede değil, taburculuk sonrası evde ya da ayaktan merkezlerde devam ettirilmelidir. Ev egzersiz programları, evde ziyaret ve tekrar değerlendirmelerle desteklenmelidir.(60)

Kişiye özel, erken başlanan, ekip temelli ve psiko-sosyal açıdan desteklenmiş rehabilitasyon programları; hastaların bağımsızlık düzeyini, yaşam kalitesini ve topluma katılımını artırır

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BÖLÜM 25

HEMORAJİK İNME

Ramazan ŞENCAN[1]

Giriş

2019 yılında, inmenin tüm alt tipleri dahil edildiğinde, küresel refah kaybı açısından, satın alma paritesine göre hesaplanan GSYH (gayrisafi yurtiçi hasıla)'e göre 2,059,67 trilyon dolarlık bir küresel yük oluşturduğu gözlemlenmektedir. Bu ekonomik kayıp içerisinde iskemik inmeye göre yaklaşık 3-4 kat daha az görülmesine karşın ona yakın bir kayıp oluşturan İntraserebral hemoraji dikkati çekmektedir. İntraserebral hemorajinin neden olduğu ekonomik kayıp yıllık 882,81 milyar dolar olarak hesaplanmaktadır **(1).** Küresel bir sağlık sorunu olarak karşımızda duran serebrovasküler hastalıkların tanınması, nedenlerin tespiti ve ortadan kaldırılması, akut dönemde uygun tedavilerin verilmesi ve hastalık sonrası kısa sürede rehabilitasyonun sağlanması, bu hastalıkların oluşturduğu ekonomik ve iş gücü kaybından en fazla etkilenen sosyal güvenlik sistemi, hükümetler ve sağlık profesyonellerinin karşısında zorlu bir süreç ve önemli bir görev olarak durmaktadır.

Epidemiyoloji

Hemorajik inme insidansı yıllık yaklaşık %12-%15/1 milyon olup, erkeklerde ve ileri yaşlarda daha sık görülmektedir. Yıllar içinde insidansı azalmakla birlikte sosyoekonomik olarak az gelişmiş bölgelerde halen yüksek oranda görülmektedir (**2, 3**). Dünya Stroke Organizasyonu'na göre inme 2021 yılında tüm dünyada

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BÖLÜM 26

GEÇİCİ İSKEMİK ATAK (GİA) TEDAVİSİ

Burak AKPEK[1]
Yusuf İNANÇ[2]

Geçici iskemik atak (GİA); kan akımı azlığına sekonder aniden ortaya çıkan fokal motor defisit veya monooküler görme kaybı gibi kısa süreli klinik belirtileri ile prezente olan bir sendromdur. (1) Genel kural olarak semptomların yirmi dört saatten kısa sürmesi ve sekel parankim hasarı oluşturmaması beklenir. Atakların büyük bir kısmı 15 dakikada düzelir. Birkaç saniye süren atakların GİA nedenli olma ihtimali düşüktür. GİA tekrarlama olasılığı ve kalıcı defisite neden olabilecek iskemik inmeye ilerleme ihtimali nedeniyle riskli bir sendromdur. (2)

İskemik inmelerde olduğu gibi GİA'lar da ilgili damar sulama alanlarını baz alan, karotis ile vertebrobaziler damarları işaret eden ön ve arka sistem olarak iki ana başlıkta incelenir. Ön sistem ile ilgili olan GİA'larda karşı vücut yarımında motor ve/veya duysal bulgular, konuşma bozukluğu (dominant hemisfer lezyonlarında)daha az oranda hemianopsi; ipsilateralse geçici monoküler körlük (amarozis fugax) görülür. Arka sistem GİA'larında ise tek veya çift yanlı motor ve/veya duysal bulgular ile hemianopsi görülür. Vertebrobaziller sistem etkilenimini gösteren başlıca bulgular ise ataksi, vertigo, diplopi, disfajidir. Dizartri iki alanı da ilgilendirebilir. (3)

GİA ile minör inme arasında etyoloji, klinik seyir ve tedavi açısından fark yoktur. Ekartasyon gerekliliğinden GİA diğer etyolojilerden ayrılmalıdır. GİA gibi fokal nörolojik bulgulara neden olup dakikalar içerisinde düzelen vasküler nedenli olmayan hastalıklar (epilepsi, migren vb.) ile görece daha uzun süreli

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GİA veya inme geçiren bir hastayı rekürren inmeden korumak için vasküler risk faktörlerini kontrol altına almak gerekmektedir. Değiştirilemeyenler hasta yaşı, cinsiyet, etnik köken ve herediter faktörler, değiştirilebilenler ise hipertansiyon, hiperlipidemi, diyabet ve sigaradır. Risk faktörlerinin önüne geçilmesi birincil önlemede olduğu gibi ikincil önlemede de büyük önem arz etmektedir. (11) Özellikle LDL kolesterol düzeyinin ek vasküler risk faktörleri olan hastalarda 100 mg/dL'nin altına indirilmesi yeni bir inme riskini ciddi oranda azaltmaktadır. Bu anlamda statin grubu ilaçların kullanımı önerilmektedir. (12)

Önleyici prosedürler ve ayrıntılı tedavi protokolleri ''İskemik İnme Tedavisi" bölümünde detaylıca anlatılmıştır.

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BÖLÜM 27

BEYİN ANEVRİZMALARI VE TEDAVİSİ

Yasin TAŞKIN[1]

İntrakranial Anevrizmalar

Etyolojisi kesin olarak bilinmemesine rağmen, arterin dejeneratif hastalığı şeklinde değerlendirilebilen, damar duvarının geri dönüşümsüz şekilde fokal genişlemesidir. %80-90'ı sporadiktir. Yaşlanma ve hemodinamik stresinde etkisi altında kalan damar duvarının bütünlüğünde bozulma ile geliştiği de düşünülmektedir. 40-70 yaş arasında sıklıkla görülmektedir(1).

Epidemiyoloji

Genel popülasyonda %1–2 oranında rastlanan intrakraniyal anevrizmaların, otopsi çalışmaları erişkin bireylerde bu oranın %5–6'ya kadar yükselebildiğini göstermektedir(2). Kadın cinsiyette, erkeğe göre 3 kat fazla saptanmaktadır. En çok 5. ve 6. dekatta izlenmektedir. Geniş çaplı anevrizmalar, kitle etkisine bağlı olarak semptomlara yol açabilirken; 7 mm'nin altındaki küçük anevrizmalar çoğunlukla semptomsuzdur, genelde rastlantı sonucu tespit edilmektedir. Sıklıkla sporadik olmakla birlikte, 3M Sendromu, Alkaptonuri, Anderson Fabry Hastalığı, Otozomal Dominant Polikistik Böbrek Hastalığı intrakranial anevrizmalar ile ilişkili hastalıklardandır. Alkol ve sigara, östrojen oranı yüksek oral kontraseptifler, kronik hipertansiyon ile kokain kullanımı; intrakraniyal anevrizma gelişme ihtimalini yükselten ana sebeplerdendirler(3). Yaş ilerledikçe görülme sıklığı artış gösteren intrakraniyal anevrizmalar, pediatrik yaş grubunda genellikle atipik

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en önemli avantajlarından biri, ana arterden çıkan perforan ve yan dalları koruyabilme özellikleridir; bu durum cihazın güvenli kullanımını artırmakta ve tedavi seçeneklerinde öncelikli hale gelmesine katkı sağlamaktadır(45).

Primer koil embolizasyonu ya da stent yardımlı koil embolizasyonu için uygun bulunmayan anevrizmaların tedavisinde, akım çevirici (flow diverter) cihazlar alternatif bir yöntem olarak ön plana çıkmaktadır. Özellikle geniş boyunlu, dev veya büyük çaplı, fusiform, koil embolizasyonuna anatomik olarak uygun olmayan küçük anevrizmalarda, dal çıkışlarının anevrizma duvarı üzerinden olduğu durumlarda, tedaviye rağmen rekürrens gelişen olgularda bu cihazlar tercih edilmektedir. Stentlere benzer şekil ve yerleşim özelliklerine sahip olan akım çeviriciler, ancak daha sıkı örgü yapıları sayesinde, anevrizma içine olan kan akımını azaltarak hemodinamik düzeyde kalıcı bir değişim oluştururlar. Böylece, tromboz oluşumunu hızlandırarak anevrizmanın kapanmasını sağlamakta ve zorlu vakalarda etkili bir tedavi seçeneği sunmaktadırlar.

İntraanevrizmal akım çevirme cihazı (WEB)

WEB (Woven EndoBridge) cihazı, anevrizmanın iç kısmına yerleştirilen ve anevrizma girişinden kan akımını kesen, ek destek gerektirmeyen örgülü tel yapısına sahip bir endovasküler tedavi aracıdır. Parent arter lümeninden ayrılarak, kan akımını bozmayacak şekilde konumlandığı için antiplatelet ilaç kullanımına ihtiyaç duyulmamaktadır. İlk olarak, yırtılma riski düşük olan geniş boyunlu ve bifurkasyon yerleşimli anevrizmalarda kullanılmaya başlanmıştır. Daha sonraları, rüptüre olmuş anevrizmalarda da, anevrizmanın daha hızlı kapanmasını sağlamak amacıyla etkin bir tedavi yöntemi olduğu gözlemlenmiştir(48).

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BÖLÜM 28

SEREBRAL VEN TROMBOZUNDA GÜNCEL TEDAVİ

Ayfer ERTEKİN[1]

Serebral Venöz Sistem Anatomi ve Fizyolojisi

Serebral venöz sistem yüzeyel ve derin venöz sistem olmak üzere iki kısma ayrılır. Yüzeysel sistem, her iki serebral hemisferin yüzeysel kanın drenajını sağlayan sagital sinüsler ve kortikal venlerden oluşur. Yüzeyel serebral venler, Trolard ve Labbé'nin anastomoz venleri ile bağlantılıdır. Trolard ven, yüzeysel orta serebral venden superior sagital sinüse uzanan büyük bir anatomik kortikal damardır. Labbé veni, yüzeysel orta serebral venden transvers sinüse uzanan büyük bir kortikal damardır. Böylece, hemisferin süperolateral yüzeyi superior sagital sinüse drene olurken, posteroinferior yönü transvers sinüse drene olur. Derin venöz sistem; internal serebral ven, Rosenthal'ın bazal veni ve kollarından oluşur. Derin venöz sistemine ait internal serebral ven ve bazal ven birleşerek galen venini oluşturur ve sonra sinüs rektusa drene olurlar. Bu sistemlerin her ikisi de çoğunlukla kanı internal juguler venlere boşaltırlar (Resim) (1).

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intrauterin araçlar kullanılabilir. Devam eden kombine hormonal kontrasepsiyon antikoagülasyonun planlı olarak kesilmesinden en az 6 hafta önce son verilmelidir (14).

Tekrarlama Riski ve Sekonder Profilaksi

SVT'li hastalarda rekürren SVT'ye ek olarak derin ven trombozu, pulmoner emboli, iskemik inme de görülebilmektedir ve herhangi bir trombotik olayın tekrarlama oranı yılda %6,5'tir.Ancak bu oran daha çok antikoagülan tedavi almayan hastalarda ortaya çıkmaktadır (58).

SVT sonrası tekrarlama riskini değerlendirmek için kanıta dayalı, SVT'ye özgü kriterler bulunmamaktadır. Eğer belirgin bir tetikleyici (enfeksiyon, hormon tedavisi vb.) varsa ve bu ortadan kaldırılmışsa, VTE tekrarlama riskinin düşük olduğu düşünülerek antikoagülasyonun kesilmesi düşünülebilir. Ancak, tetikleyici devam ediyorsa (örneğin malignite, şiddetli trombofili, aktif otoimmün hastalıklar vb.), tekrarlama riskinin arttığı varsayılmalı ve uzun süreli sekonder profilaksi düşünülmelidir. Özellikle antikoagülasyon iyi tolere ediliyorsa, kanama riski düşükse ve hastanın antikoagülasyona devam etme olasılığı yüksekse, 12 aydan daha uzun süreli profilaksi düşünülebilir. Sekonder profilaksiye devam ediliyorsa, risk profilindeki değişiklikleri tespit etmek ve antikoagülasyonu buna göre ayarlamak için risk-yarar değerlendirmesini düzenli olarak yapmak gerekir (14).

Sonuç olarak, SVT de altta yatan nedenlerin ve risk faktörlerinin belirlenmesi prognoz ve uzun dönem tedavi belirlenmesi açısından önemlidir.

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BÖLÜM 29

MİYASTENİA GRAVİSTE GÜNCEL TEDAVİ

Didar ÇOLAKOĞLU[1]

Giriş

Miyastenia Gravis (MG) nöromüsküler kavşağın postsinaptik disfonksiyonu ile karakterize otoimmün bir hastalıktır. Kadın ve erkekte yaklaşık olarak eşit oranda gözlenir fakat kadınlarda ortalama olarak daha genç yaşlarda ortaya çıkar (1). En yaygın semptomları, pitoz, diplopi, fasiyal, bulber kas güçsüzlüğü ile ekstremite güçsüzlüğüdür (1). MG, serolojik bulgularına, başlangıç yaşına ve klinik özelliklerine göre alt gruplara ayrılır (1,2). Serolojik olarak en yaygın alt grupları; asetilkolin reseptör (AchR) antikor pozitif olan MG, kas spesifik kinaz (MuSK) antikoru pozitif olan MG, düşük dansiteli lipoprotein reseptör ilişkili protein 4 (Lrp4) antikor pozitif olan ve herhangi bir antijene karşı antikor saptanmamış olan seronegatif MG hastalıklarıdır (1,2). Ayrıca AchR, MuSK ve Lrp4 antikorları ile birlikte agrin antikoru da MG hasta serumlarının %10-15'inde saptanabilir (1,3). Hastalık başlangıç dönemine göre 3 gruba ayrılır; 18 yaş öncesi başlangıç juvenil başlangıçlı MG, 19-50 yaş arası erken başlangıçlı MG, 50 yaş sonrası başlayan semptomlar varsa geç başlangıçlı MG adını alır. Bazı çalışmalar ise 65 yaş ve sonrasında başlayan MG semptomları olan hastalar için, çok geç başlangıçlı MG gruplandırmasını yapar.

MG klinik olarak hastaların 2/3'ünde oküler semptomlarla başlar, %10-15 hastada oküler semptomlarla sınırlı kalırsa oküler form MG'den bahsedilir. Eğer ilk 3 yıl içinde yüz, orofaringeal ya da ekstremite kaslarına yayılım olursa jeneralize

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BÖLÜM 30

GUİLLAİN-BARRÉ SENDROMU TEDAVİSİ

Damla ERİMHAN ÇEVİK[1]

Giriş

Guillain-Barré Sendromu (GBS) immün aracılı süreçlerle oluşan, akut başlangıçlı ve ilerleyici karakterde, monofazik seyirli bir poliradikülonöropatidir. Edinsel nöromüsküler paralizinin en sık sebebidir (1). Bu nedenle önemli bir nörolojik acildir. Küresel insidansı 1-2/100.000 olup her yaştan insanı etkileyebilmektedir (2). 50-70 yaş arası insidans artmakta ve erkekler kadınlardan 1,5 kat daha fazla bu hastalıktan etkilenmektedir (3). GBS'de genellikle duyusal semptomlarla birlikte alt ekstremitelerde başlayıp üst ekstremiteleri ve kraniyal sinirleri de etkileyebilen, şiddeti 2-4 hafta içerisinde zirveye ulaşan ilerleyici güçsüzlük görülür (4). Tipik özellikleri progresif asendan paralizi, arefleksi ve beyin omurilik sıvısı (BOS) incelemesinde albuminositolojik disosiasyondur. Tanısı klinik, elektrofizyolojik tetkikler ve laboratuvar bulguları ile konulmaktadır (5, 6).

1916'da Guillain, Barré ve Strohl hastalığı "benign" ve "tamamen iyileşen" bir ekstremite güçsüzlüğü olarak tanımlamış olsalar da günümüzde GBS, hastaların üçte birinde solunum güçlüğüne ve morbiditeye sebep olabilen bir hastalık olarak değerlendirilmektedir (7). GBS'nin mortalitesi %1-13 arasındadır. GBS hastalarının en sık ölüm sebebi kardiyovasküler ve respiratuvar komplikasyonlardır (8). Bu komplikasyonların önlenmesinde doğru ve etkin tedavinin zamanında uygulanmasının kritik önemi vardır. Üzerinde çalışılan birçok farklı tedavi yaklaşımı olmakla birlikte, plazma değişimi ve intravenöz immünglobulin (IVIg) GBS'de etkinliği gösterilmiş temel tedavi yöntemleridir (9).

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ile de karşılaşılabilir. Nöropatik ağrıda ilk tercih gabapentinoidler (gabapentin ve pregabalin) ve serotonin-noradrenalin gerialım inhibitörleri (duloksetin ve venlafaksin) ve karbamazepindir. Trisiklik antidepresanlar da kullanılabilir ancak otonomik tutulumu olan hastalara dikkat edilmelidir. Opioidler ağrı tedavilerine eklenebilir ancak konstipasyon, ileus, konfüzyon, solunum baskılanması ve bağımlılık riski açısından dikkatli olunmalıdır. Akut dönemde ağrının endonöral inflamatuvar ödem kaynaklı olabileceği öne sürülmüş ve ağrı tedavisinde steroidler de denenmiştir ancak etkisi gösterilmemiştir (32).

Sonuç

Guillain-Barré sendromunda erken tanı ve zamanında başlanan doğru tedavi, morbidite ve mortalitenin önlenmesi açısından önemlidir. Plazma değişimi ve IVIg günümüzde etkinliği kanıtlanmış tedavi seçenekleridir. Bu iki yöntem arasında belirgin üstünlük saptanmamış olup tanı zamanı ve klinik şiddete göre tedavi seçimi yapılması gerekir. Hafif klinik seyirli olgularda medikal tedavi etkinliği gösterilmemiştir. Halen ambulatuvar olan hastalar ilk 2 hafta içerisinde üst ekstremite ve kranial sinirlerde tutulum, yutma-solunum güçlüğü, otonomik tutulum gibi kötü prognostik faktörlere sahip ise tedavi edilmelidir. Desteksiz yürüyemeyen hastalarda ise tedavi gecikmeden başlanmalıdır. Tedavide günaşırı 5 kür 50 mL/kg/kür plazma değişimi veya 5 gün 0,4g/kg/gün IVIg kullanılabilir. Bu iki tedavinin avantaj ve dezavantajları olmakla birlikte birbirine üstünlükleri gösterilememiştir. Tedavi yanıtı yetersiz olan hastalarda alternatif tedaviye geçişin veya tedavi rejimini tekrarlamanın etkinliği gösterilememiştir. Hastaların erken dönemde rehabilitasyona alınması, bu süreçte ağrı yönetimin sağlanması ve psikolojik desteğin ihmal edilmemesi tedavi sürecinin başarısını arttırmaktadır.

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BÖLÜM 31

KRONİK İNFLAMATUVAR DEMİYELİNİZAN POLİNÖROPATİ TEDAVİSİ

Yusuf KOÇAK[1]

Giriş

Kronik İnflamatuvar Demiyelinizan Polinöropati (KIDP) (Chronic Inflammatory Demyelinating Polyneuropathy – CIDP*) sinir köklerinin ve periferik sinirlerin immün aracılı inflamasyonu ile seyreden bir poliradikülonöropatidir. İmmün mekanizmalar konusunda her ne kadar bir görüş birliği sağlanmış olmasa da, immünmodülatör ve immünsupresif tedaviye yanıt vermesi şu an için bu hastalığı otoimmün olarak kabul ettirmektedir. Patofizyolojisinde segmental demiyelinizasyon ve remiyelinizasyon vardır. Klinik olarak, proksimal ve distal kasların hemen hemen eşit olarak tutulduğu simetrik motor güçsüzlük, vibrasyon ve pozisyon duyusunun ağırlıklı tutulduğu duyusal bozukluk ve arefleksi ile karakterizedir. İlk kez 1890 yılında İsviçre' de çalışan Alman nörolog Hermann Eichhorst tarafından CIDP kliniğine sahip hastalar tanımlanmıştır. O dönemde bu isimle anılmasa da tanımlanan hastalar tipiktir (1). CIDP, farklı klinik özelliklere ve farklı tedavi yanıtlarına sahip birçok alt tipi olan bir hastalıktır. Dolayısı ile bu bölümün ana konusu olan CIDP tedavisine geçmeden önce, tedavi konusunda yönlendirici olması açısından, hastalık ile ilgili kısa bilgiler de verilecektir.

Epidemiyoloji

CIDP prevalansı coğrafi bölgelere göre değişmekle birlikte 0,67-7,7/100.000 olarak tespit edilmiştir. Erkeklerde kadınlara göre yaklaşık 2 kat daha fazla

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Sonuç

CIDP tedavisi bugün için sınırları belirlenmiş ve netleşmiş bir tedavidir. Ancak bu tedavinin hem uzun sürmesi hem de yan etki ve komplikasyonlarının ciddi olması sebebi ile tanı aşaması çok dikkatli yürütülmeli ve tedaviye başlamak için mümkün olduğunca tanı kesinliğe yaklaştırılmalıdır. Her ne kadar tedaviye verilen yanıt tanı için değerli bir parametre olarak kabul edilse de, tanı kesinliği öncelikli hedef olarak her zaman ön planda olmalıdır.

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BÖLÜM 32

MOTOR NÖRON HASTALIKLARINDA GÜNCEL TEDAVİ YAKLAŞIMLARI

Esma KOBAK TUR[1]

1. Giriş

Motor nöron hastalıkları (MNH), istemli kas hareketlerini kontrol eden alt ve üst motor nöronların ilerleyici dejenerasyonu ile karakterize edilen nörodejeneratif bozukluklardır. En sık karşılaşılan MNH türleri arasında **amyotrofik lateral skleroz (ALS)** ve **spinal musküler atrofi (SMA)** yer alır. Bu hastalıklar genellikle ilerleyici seyirli olup motor kayıplar, solunum yetmezliği ve beslenme bozukluklarıyla sonuçlanabilir. Tedavi yaklaşımları, hem hastalığın patogenezine yönelik medikal uygulamaları hem de hastalığın semptomlarına yönelik destekleyici tedavileri kapsar. Ayrıca son yıllarda genetik ve biyoteknolojik temelli yeni nesil tedavi yöntemleri dikkat çekici gelişmeler göstermiştir.

2. Medikal Tedavi Yaklaşımları

2.1. Amyotrofik Lateral Skleroz (ALS)

ALS'de medikal tedavi, hastalığın progresyonunu yavaşlatmayı amaçlar.

2.1.1. Riluzol

Glutamat salınımını inhibe ederek nörotoksisiteyi azalttığı gösterilmiştir. Bunu glutamik asit release inhibisyonu, NMDA reseptör ilişkili yanıtları nonkompotetif bloke ederek ya da voltaj bağımlı sodyum kanallarını direk aktive ederek yapmaktadır. Günde 2 kez 50 mg dozda kullanılmaktadır. Ortalama yaşam süresini

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BÖLÜM 33

İNFLAMATUAR MİYOPATİLERİN TEDAVİSİ

Kübra IŞIK[1]

İnflamatuar Miyopatiler

Kas inflamasyonu ile karakterize sıklıkla deri, akciğer, eklemleri tutan ve kas dışı belirtilerin de görüldüğü heterojen bir hastalık grubudur (1). Tedavi edilebilir miyopatilerdendir (2). İnflamatuar Miyopatiler (İM); dermatomiyozit (DM), poliomiyozit (PM), sporadik inkluzyon cisimcikli miyozit (S-İCM) , nekrozitan otoimmun miyozit (NOM), overlap miyozit, immun kontrol inhibitörlerine bağlı miyozit (ICI Miyozit) olarak alt gruplara ayrılır . S-ICM dışındaki inflamatuar miyopatilerin kliniği benzerdir. Proksimal güçsüzlük, kreatin kinaz (CK) yüksekliği ve subakut başlangıç görülür. S-İCM' de ise parmak fleksörleri ile quadriceps tutulumu belirgin olup normal veya hafif yüksek CK görülür (3). S-İCM' de klinik farklılıklar olduğu kadar tedavinin etkinliği, kombinasyonları ve stratejisi diğer inflamatuar miyopatilerden farklılık göstermektedir. Diğer İM'de kullanılan birçok tedavinin S-İCM de belirgin etkinliği yoktur (1). İM'de bazı hastalar monosiklik seyir göstersede hastaların yüzde elli den fazlası kronik ve sürekli bir seyir yaşarlar (4). Bu nedenle tedavi seçimi önemlidir. Ayrıca İM 'lerin yaklaşık %40 'ı intertisyel akciğer hastalığı ile başvururlar. Bu grup hastalar da yaygın kas tutulumu görülür ve kötü prognoza sahiptir (5).İnflamatuar miyopatilerin tedavi seçenekleri geniştir fakat tedavi seçim ve kombinasyonu bu konuda yetkin branş hekimleri tarafından yapılmaktadır. Tedavide immünsupresif ,ımmünmodulatör ve biyolojik ajanlar kullanılır (1). Genel olarak İM'lerin çoğu immünsupresif

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4-Plazmaferez

Plazma değişimi (PE), hastanın plazmasının kanından ayrıştırılarak insan plazması veya albumin solusyonu ile değiştirldiği ve kanın saflaştırıldığı yöntemdir. PE ile otoantikorlar, inflamasyon sitokinler gibi patojen hücreler uzaklaştırılır. Bu sayede ımmünsupresif ve ımmünmodülatör ilaçlarının etkiniliği başlayana kadar zaman kazandırır. İM'de özellikle hızlı ilerleyen intertisyel akciğer hastalığında etkiniliği ile sağ kalım üzerine etkisine dair çalışmalar yapılmıştır ve faydalı olduğu gösterilmiştir (12). Tedaviye drençli veya orta şiddetli ICI miyozit 'de önerilmektedir (35). Şu anda daha çalışmalar kısıtlı olsa da vaka düzeyinde bildirilen deneyimlere bakılınca şiddetli intertisyel akciğer hastalığı olan inflamatuar miyopati tedavisinde oldukça umut vericidir (36).

5-Egzersiz

Egzersiz IM'de kasda inflamatuar ve noninflamatuar süreçleri etkileyerek hastalık aktivitesini azaltıp, fonksiyonel kapasiteyi artırarak fayda sağlar (37). Noninflamatuar olarak çok çalışan kasda yüklenme ve hipoksi oluşur. Bu iki neden kasda satellit hücre aktivasyonu yaparak rejenerasyonu sağlar. İnflamatuar olarak kasda da T hücre aktivasyonunu etkileyerek kas hasarı ve fibrozu azaltır (38,39). IBM 'de çoğu tedavi etkisiz iken egzersiz klinik olarak anlamlı iyileşmeler sağladığı çalışmalarla kanıtlanmıştır (37,2). Egzersiz olarak özellikle klinik tamamen düzelene kadar yorucu olmayan drenç egzersizlerini içermesi önerilmektedir (6). Medikal tedavi ile beraber egzersiz uygulanmıyorsa tedavideki başarısızlık oranı artacaktır.

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BÖLÜM 34

ESKİ VE YENİ KUŞAK ANTİEPİLEPTİK İLAÇLAR

Oğuz ÇELİK[1]
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1. Giriş

Epilepsi, dünya genelinde yaklaşık 50 milyon insanı etkileyen, kronik, tekrarlayıcı nöbetlerle seyreden bir nörolojik hastalıktır. Nöbetlerin kontrol altına alınmasında temel tedavi yaklaşımı, antiepileptik ilaçlar ya da güncel terminolojiyle antinöbet tedavileri (antiseizure medications, ASM) kullanımıdır. Son yetmiş yılda geliştirilen ilaçlar, farklı etki mekanizmaları ve farmakokinetik özellikler ile epilepsi tedavisinde geniş bir yelpaze sunmakta; ancak seçim süreci etkililik, güvenlilik, ilaç etkileşimleri, hasta özellikleri, komorbiditeler ve maliyet gibi çok sayıda değişkeni içermektedir.

Klasik literatürde 'eski kuşak' antiepileptikler genellikle fenobarbital, fenitoin, karbamazepin, valproat ve etosüksimid gibi 1950–1980 döneminde klinik kullanıma giren ilaçları kapsamaktadır. Daha sonra 1990'lardan itibaren lamotrijin, gabapentin, topiramat, okskarbazepin, levetirasetam gibi ilaçlar 'yeni kuşak' ya da ikinci nesil; 21. yüzyılda geliştirilen lakosamid, perampanel, brivarasetam, eslikarbazepin, rufinamid, zonisamid, kanabidiol ve cenobamat gibi ajanlar ise üçüncü nesil veya modern ASM'ler olarak anılmaktadır. Bu sınıflama kesin çizgilere sahip olmamakla birlikte, klinik pratikte eski ve yeni kuşak ilaçların karşılaştırılması, hasta yönetiminde kritik karar noktaları açısından yararlıdır.

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BÖLÜM 35

DİRENÇLİ EPİLEPSİNİN MEDİKAL TEDAVİSİ

Tülin GESOĞLU DEMİR[1]

İlaca Dirençli Epilepsinin Tanımı

İlaca dirençli epilepsi, Uluslararası Epilepsi ile Mücadele Birliği (ILAE) tarafından, etkili günlük dozda kullanılan en az iki anti-nöbet ilacına (ANİ) rağmen nöbetlerin devam etmesi şeklinde tanımlanmaktadır (1). Tanı kriterinde, hastanın nöbetsiz kalıp kalmaması esas alınırken; nöbet tipi, sıklığı veya epilepsiyle ilişkili diğer komplikasyonlar değerlendirmeye alınmamaktadır. Ancak, bu faktörler bireysel hasta düzeyinde yaşam kalitesini etkilediğinden, terapötik yönetim sürecinde dikkate alınmaktadır.

Anahtar Noktalar

- Bir ANİ'a verilen yanıtın değerlendirilmesinde, hastanın başlangıçtaki nöbet sıklığına bağlı olarak izleme süresi değişiklik gösterebilir. Haftada birkaç nöbet geçiren bir hastada nöbetlerin devam etmesi durumunda, ANİ'ın başarısız olduğu sonucuna varmak için birkaç haftalık takip yeterli olurken; yılda 1–2 nöbet geçiren bir hasta için değerlendirme süresi çok daha uzun tutulmalıdır.
- İki ANİ eşiği ilk bakışta keyfi görünebilir; bu eşik, ileriye dönük epilepsi kohortlarında bildirilen tedavi yanıtı modelleriyle ilişkilidir (2–4). İki ANİ başarısızlığından sonra nöbetten kurtulma olasılığı katlanarak azalmakta ve dört başarısızlık sonrası bu oran %5'in altına inmektedir (4,5). Buna rağmen, ilaca dirençli epilepsili yetişkin hastaların yaklaşık %20–25'inde en

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Preklinik çalışmalar, ANİ birlikteliklerinde sinerjik etkinin mümkün olduğunu gösterse de, bu çalışmaların büyük bir kısmı sinerjik, additif ve antagonistik aktiviteleri ayırt etmeye yönelik tasarlanmamıştır (67,68). Klinik uygulamada, nöbet sıklığı üzerinde beklenen fayda ile advers olayların güvenlik profili arasındaki denge, hasta bazında bireyselleştirilmelidir. İnatçı nöbet durumlarında mevcut ANİ rejiminin sürdürülmesi bazı hastalar için en uygun seçenek olabilmekle birlikte, özellikle sık tonik-klonik nöbet geçiren hastalarda aktif tedavi revizyonu, SUDEP riski gibi ciddi komplikasyonların önlenmesi açısından önem taşımaktadır (69,70).

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OTOİMMÜN EPİLEPSİLERİN TEDAVİSİ

Serhat AKIN[1]

Giriş

Otoimmün epilepsi, otoimmün reaksiyonlar aracılı meydana gelen epilepsi türleridir (1). Nedeni bilinmeyen fokal epilepsilerin %5'inin otoimmün epilepsilerin oluşturabildiği tahmin edilmektedir. (2-6). Otoimmün epilepsinin, "otoimmün aracılı epilepsi "olarak otoimmün beyin hastalıklarına ikincil olan kronik nöbetleri ifade etmesinin daha uygun olduğunu ve "immün aracılı epilepsinin akut fazında görülen akut semptomatik nöbetler" den ayrımını savunan görüşler mevcuttur.(7-9) Son yirmi- otuz yılda yapılan çalışmalarla otoimmün epilepsinin heterojen bir klinik tablo olduğu ve santral sinir sisteminin kendi antijenleri olan nöral hücre içi proteinleri ve/veya hücre yüzey hedef alan antinöral antikorlarla bağlantılı olabildiği gösterilmiştir (10). Özellikle otuzlu yaşlardan sonra günler- haftalar içinde gelişen epileptik nöbetler, hastanın farklı tipte nöbetlerinin bulunması, multifokal başlangıçlı nöbetlerin olması, antinöbet tedaviye direnç, hastanın kendisi ve ailesinde otoimmünite veya neoplazi öyküsü bulunması, otoimmün epilepsi için önemli klinik ip uçları olup dirençli nöbetler otoimmün epilepsinin en belirgin semptomlarıdır (11). Hızlı ilerleyen bilişsel bozukluklar, hareket bozukluklarıyla ilişkili fenomenler, psikiyatrik bozukluklar ve otonom semptomlar da otoimmün epilepside görülebilir. Semptomlar, genelde son 3 ay içinde başlangıç gösterir. Prodromal olarak ateş, sersemlik gibi semptomlar ya da üst solunum yolu enfeksiyonu ortaya çıkabilir (12). Görüldüğü gibi, "otoimmün epilepsi" sadece epileptik nöbetlerle sınırlı olmayıp farklı

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taşıyan epilepsi vakalarında ketojenik diyetin güvenli ve uygulanabilir bir tedavi seçeneği olduğunu belirtmektedir. Özellikle status epileptikus öyküsü olan hastalarda KD'nin etkili olabileceği vurgulanmıştır (80).

Yetişkinlerde yapılan çalışmalarda, ketojenik diyetin (KD) ve modifiye Atkins diyetinin (MAD) nöbet sıklığını %50 veya daha fazla azaltmada etkili olduğu gösterilmiştir. Bir derlemede, KD uygulanan hastaların %32'sinde, MAD uygulananların ise %29'unda bu düzeyde azalma bildirilmiştir (81). Diyet, deneyimli bir ekip tarafından planlanmalı ve hasta eğitilmelidir. Düzenli klinik kontroller ve laboratuvar testleri ile ketozis durumu ve yan etkiler (kabızlık, kilo kaybı, hiperlipidemi ve böbrek taşı) görülebilir. Tedavi süresi hastanın yanıtına göre belirlenir; genellikle 3–6 ay içinde etkinlik değerlendirilir.

Ketojenik diyet, yetişkinlerde otoimmün ve dirençli epilepsi tedavisinde umut verici bir seçenek olarak değerlendirilmektedir. Ancak, her hasta için bireysel değerlendirme ve multidisipliner bir yaklaşım gereklidir. Diyetin uygulanması ve izlenmesi sırasında deneyimli bir ekip tarafından desteklenmesi, tedavinin başarısı için kritik öneme sahiptir.

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BÖLÜM 37

STATUS EPİLEPTİKUSUN TEDAVİSİ

Pelin YENİLMEZ YEŞİLDAŞ[1]

Epileptik nöbetlerin çoğu saniyeler ve dakikalar içinde bir tedavi girişimi gerektirmeden kendiliğinden sonlanır. Nöbetin alışılmış süreden uzun sürmesi veya bu süre içinde hasta düzelmeden ve eski nörolojik kliniğine dönmeden çok sayıda nöbetin arka arkaya tekrarlamasına status epileptikus denir (1).

Fokal ve absans nöbetleri de dahil olmak üzere her türlü epileptik nöbet status epileptikusa dönüşebilir. En sık ve en kolay tanınan tipi jeneralize konvülzif status epileptikustur. (JTKSE)

Uluslararası Epilepsi ile Savaş Ligi'nin (ILAE) 2015'te yayınlamış olduğu SE'nin yeni tanımlama ve sınıflandırmasında SE için 2 farklı zaman noktası belirlenmesi önerilmiş; 1.zaman noktası yani t1 SE tedavisine başlamayı gerektiren ana kadar geçen süreye, 2.zaman noktası yani t2 geri dönüşümsüz nöronal hasar gibi uzun dönem sonuçları belirleyen süreye işaret eder. Buna göre SE anormal derecede uzamış (t1 zamanı) nöbetlere yol açan mekanizmaların başlaması ya da nöbeti sonlandıran mekanizmaların yetersiz kalması sonucu oluşan, nöbetlerin tipi ve süresine bağlı olarak (t2 zamanı), nöronal ölüm, nöron hasarı, nöral ağ değişiklikleri gibi uzun dönem sonuçları olabilen klinik tablodur. Jeneralize konvülzif status epileptikus için t1 süresi 5 dakika, t2 süresi 30 dakika şeklinde tanımlanırken, bilinç bozukluğu olan fokal status epileptikus için t1 süresi 10 dakika, t2 süresi >60 dakika, absans status epileptikus için t1 süresi 10-15 dakika, t2 süresinin ise bilinmediği belirtilmiştir (2).

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Non-konvülzif Status Epileptikus (NKSE)

NKSE, hafif motor anormallikler veya hiç motor anormallik olmaksızın mental durumda değişiklik ile prezente olan bir hastada, EEG'de sürekli epileptifom aktivite ile karakterizedir. Bilinç bozukluğu (%82) (konfüzyon, koma, letarji, hafıza kaybı), konuşma bozukluğu (%15), myoklonus (%13), davranış bozukluğu (%11), anksiyete, ajitasyon, delirium(%8), ekstrapiramidal bulgular (%7), halüsinasyon (%6) şeklinde klinik bulgular görülebilir (27). Absans status epileptikus (ASE), kompleks parsiyel status epileptikus (KPSE) ve güç fark edilen (subtle) SE şeklinde 3 gruba ayrılır. Güç fark edilen SE genelde iyi tedavi edilmemiş konvulzif SE hastalarında görülen minimal motor hareketlerin olduğu ya da hiç motor hareket olmadan komadaki hastalarda elektrografik olarak kaydedilen nöbet aktivitesi ile karakterizedir (24). Tedavi konvulzif SE'deki gibidir. Ancak genel anesteziye geçilmeden önce daha fazla antiepileptik ilaçlar denenebilir.

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BÖLÜM 38

MİGRENİN GÜNCEL TEDAVİSİ

Zeynal TUNÇ[1]

1.Giriş

Baş ağrısı, hekime başvurunun sık sebeplerinden biridir. Migren, dünya nüfusunun yaklaşık %14,4'ünü etkileyen (1) kronik, tekrarlayıcı bir primer baş ağrısı bozukluğudur. Çoğu zaman çocukluk veya ergenlik döneminde başlar, prevalansı 30–34 yaş grubunda zirveye ulaşır (2), ardından yaşla birlikte azalır. Türkiye'de migren prevalansı yaklaşık **% 16.4** olarak bildirilmektedir. Kadınlarda erkeklere oranla yaklaşık 3 kat daha sık görülmektedir (3).

Migren, genellikle tek taraflı, zonklayıcı tarzda, orta veya şiddetli ağrı atakları şeklinde seyretmektedir. Migren ataklarının fotofobi, fonofobi, bulantı, kusma gibi semptomlarla birlikte görülmesi, hastanın sosyal ve mesleki yaşam kalitesinin ciddi oranda düşmesine neden olmaktadır. Yol açtığı özürlülük, iş gücü kaybı, bireysel ve toplumsal ekonomik yük nedeniyle migren tedavisi önem arz etmektedir.

2.Migrenin Patofizyolojisi

Migren, trigeminovasküler sistemin aktivasyonu ile karakterize olan nörovasküler bir hastalıktır (4,5). Bu aktivasyon sonucunda trigeminal afferent sinir uçlarından kalsitonin gen ilişkili peptid (CGRP), substans P ve nörokinin A gibi nöropeptitler salınır. Bu nöropeptitler meningeal damarları genişletir ve plazma ekstravazasyonuna yol açarak nörojenik inflamasyonu tetikler (5,6,7).

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Kronik migrenin önlenmesinde güçlü öneriyle ve yüksek düzeyde kanıtla desteklenen tedavi seçenekleri arasında onabotulinumtoxinA (155–195 IU, intramüsküler, 4 haftada bir), atogepant 60 mg oral, eptinezumab 100 ve 300 mg intravenöz (üç ayda bir), fremanezumab 225 mg subkutan (ayda bir), fremanezumab 675 mg subkutan (üç ayda bir) ve galcanezumab 120 mg subkutan (ayda bir) yer almaktadır (93).

Buna karşılık, topiramat için bildirilen dozlar (50 mg, 100 mg ve 200 mg oral) düşük düzeyde kanıtla desteklenmiş olup yalnızca zayıf öneri kapsamında değerlendirilmektedir (93).

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BÖLÜM 39

GERİLİM BAŞ AĞRISINDA GÜNCEL TEDAVİLER

Özgül OCAK[1]
Hamit ÇELİK[2]

Giriş

Gerilim tipi baş ağrısı (GTBA), oldukça sık gzölenen bir baş ağrısı bozukluğudur. Alın, ense ve başın arka kısmında, hafif ya da orta şiddette, baskılayıcı ya da sıkıştırıcı nitelikte iki taraflı ağrılarla tanımlanır. "Gerilim" terimi, kas kasılmasının ve duygusal gerginliğin rolünü vurgular; bu nedenle kas gevşetme ve stres yönetimine odaklanan çeşitli tedaviler geliştirilmiştir.

Migren ile GTBA'nın birlikte görülebildiği ve tedavilerinde bazı benzerlikler (örneğin steroidal olamayan anti-inflamatuvar ilaçlar veya amitriptilin gibi) olduğu bilinmesine rağmen, GTBA hâlâ migren kadar araştırılmamakta ve daha az tedavi geliştirilmektedir (1).

Migrenin ayırt edici özelliklerinden biri CGRP mekanizmasıdır. Bu mekanizma son zamanlarda önemli bir araştırma konusu olmuştur. Buna karşın, GTBA'nın belirgin bir biyobelirteci bulunmamakta ve sık görülen epizodik ya da kronik GTBA için randomize kontrollü çalışmalara dayanan etkili koruyucu ilaç tedavileri mevcut değildir. Bu nedenlerle GTBA araştırma alanında ihmal edilmektedir.

Bu derleme, GTBA'nın epidemiyolojisi, patofizyolojisi, tanısı ve tedavisine dair güncel bulgulara genel bir bakış sunmayı hedeflemektedir.

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BÖLÜM 40

İDİYOPATİK İNTRAKRANİYAL HİPERTANSİYON

Cem DİREYBATOĞULLARI[1]

İdiyopatik intrakraniyal hipertansiyon (İİH), intrakraniyal basıncın, beyinde yer kaplayıcı bir lezyon, enfeksiyon ya da beyin omurilik sıvısı (BOS) akımını engelleyecek herhangi bir obstrüktif patoloji olmaksızın artışını ifade eder. Bu tablo psödotümör serebri olarak da bilinmektedir. Güncel terminolojide İİH tercih edilse de, psödotümör serebri kavramı hala klinisyenler tarafından kullanılmaktadır.

İİH fizyopatolojisi günümüzde net değildir. Koroid pleksuslardan artmış BOS üretimi, araknoid granülasyonlardan azalmış BOS emilimi, yapısal stenotik bozukluğa sekonder artmış venöz basınç gibi birçok hipotez öne sürülse de patogenez hala tartışmalıdır (1).

Epidemiyoloji

Her yaş ve cinsiyette saptansa da, İİH genelde genç kadınlarda görülen bir tablodur. Kadın cinsiyetin yanında bir diğer önemli risk faktörü obezitedir. Genel popülasyonda yıllık insidans 1/100.000 civarında iken, bu oran kadınlarda 2-3 kat, obez kadınlarda ise 20 kat daha yüksektir. Dünya genelinde her iki cinsiyette de İİH insidansında artış dikkat çekmekte olup, bu durum son yıllarda giderek artan obeziteye bağlanmaktadır (2).

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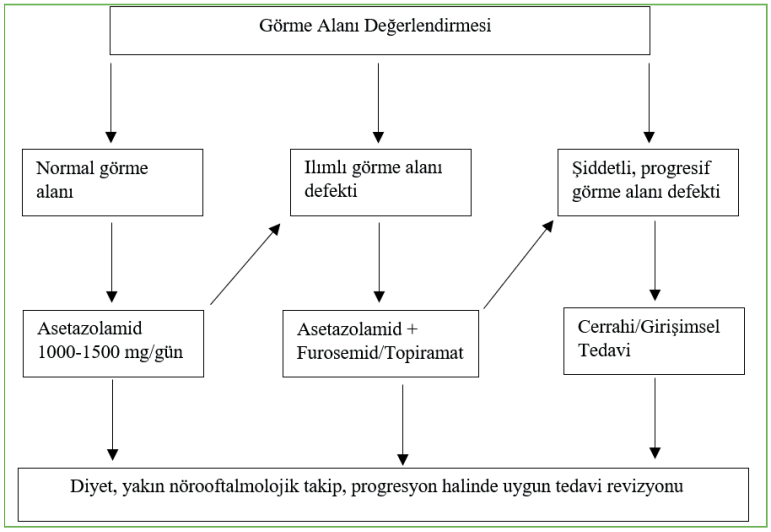

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BÖLÜM 41

İLAÇ AŞIRI KULLANIMA BAĞLI BAŞ AĞRISI TEDAVİSİ

Zeynep Vildan OKUDAN ATAY[1]

İlaç aşırı kullanıma bağlı başağrısı tedavisinde (İAKB) ilk ve en önemli göz önünde bulundurulması gereken husus aşırı kullanılan ilaç veya ilaçların kesilmesidir (detoksifikasyon). Hasta uyumunun tedavi sürecine pozitif katkısı bilindiğinden hasta ve yakınlarının bilgilendirilmesi oldukça önem arz etmektedir (1,2). Sosyal yardım alan, düşük geliri olan, düşük eğitim düzeyine sahip, sigara içen, obez ve kadın hastalarda İAKB' nın daha yaygın olduğu bilinmektedir fakat ilaç kesilmesinin sonuçları tahmin edilememektedir (3,4,5). İlaç kesilmesine bağlı görülebilecek yoksunluk ve geri çekilme semptomlarının (baş ağrısı, bulantı, kusma, taşikardi, hipotansiyon, sinirlilik vs.) geçici bir durum olduğu ve sıklıkla ilk 2 hafta (2-10 gün) içerisinde yaşanabileceği bilgisi hastaya verilmelidir. Yaşanan tüm olumsuzluklara rağmen ağrı kesici ilaç almaması gerekliliği iyice anlatılmalıdır. Yapılan çalışmalarda çekilme döneminin triptan alan hastalarda daha kısa olduğu gösterilmiştir (6).

Bu dönemde hidrasyon ve kurtarıcı ilaç kullanımı da tedavinin önemli bir basamağını oluşturmaktadır. Analzejikler, nöroleptikler, amitriptilin, valproat, trankilizanlar, intravenöz dihidro-ergotamin ve oksijen önerilen tedaviler arasında yer almaktadır (6,7). Streoidler yoksunluk semptomlarının kısa süreli tedavisinde kullanılabilir fakat bu konuda tam bir fikir birliği yoktur ve bazı çalışmalarda oral streiod tedavisinin plesaboya üstünlüğü gösterilememiştir (8,9). Proflaktik ilaç kullanımın da tartışmalı olduğu bu hastalarda topiramat ve valproik asit kullanımının faydasını gösteren çalışmalar bulunmaktadır (10).

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daha kötü bir tedavi sonucunun öngörücüleri olarak kanıtlanmıştır. Bu nedenle, tedaviyi kişiselleştirmek için Saper ve Rossi ve ark. (22,23) tarafından önerildiği gibi İAKB hastalarını basit ve karmaşık olarak ayırmak önemli olabilir. Basit hastalar ayakta tedaviye kıyasla yatarak tedaviden daha iyi bir etki görmezken, komplike hastalar en azından kısa vadede yatarak tedaviden sonra daha iyi bir sonuca sahip olabilir (24). Başağrısı tipine, kullanılan ilaç türüne ve süresine bağlı olarak nüks sık görülmekle birlikte, ayaktan veya yatarak tedavi edilen hastaları, hem çekilme semptomlarının yönetilmesi hem de tedavi başarısının yakın takibi için mutlaka sık aralıklarla özellikle de ilk bir yıl içinde yakından takip etmek gereklidir.

Çeşitli çalışmalarda multidisipliner veya non-farmakolojik tedavilerin etkileri açıklanmaktadır. Başağrısı hemşiresinin desteğine sahip olma, elektronik günlük ve psikoterapi alma konusundaki karşılaştırmalı çalışmaların hepsinde ortak olan nokta, hastaların yakın takip almış olmaları veya klinikle iletişime geçme olanağına sahip olmaları ve personelin tedaviyi belirli İAKB hastasına yönlendirmesi yani daha kişiselleştirilmiş bir tedavi vermeleridir. Bu destek muhtemelen nüksetmeyi önleyebilir (25,26).

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BÖLÜM 42

KAFA TRAVMASINA BAĞLI BAŞ AĞRISININ TEDAVİSİ

Reşit YILMAZ[1]

Giriş

Post travmatik baş ağrısı (PTBA), hafif travmatik beyin hasarının (hTBH) yaygın ve yaşam kalitesini ciddi şekilde etkileyen bir sonucudur[1]. Uluslararası Baş Ağrısı Derneği'nin ICHD-3 sınıflamasına göre, post travmatik baş ağrısı, baş ve/veya boyun bölgesine alınan bir yaralanma veya travmayı takiben ortaya çıkan ve baş ağrısının yaralanmadan sonraki 7 gün içinde, bilincin yeniden kazanılmasından sonraki 7 gün içinde ya da ağrıyı hissetme ve bildirme yetisinin geri kazanılmasından sonraki 7 gün içinde başlamasıyla tanımlanan sekonder bir baş ağrısı türüdür[2]. Baş ağrısı başlangıcından itibaren 3 ay içinde düzelirse, bu durum akut post travmatik baş ağrısı (akut PTBA) olarak tanımlanır; baş ağrısının 3 aydan daha uzun sürmesi halinde ise kronik post travmatik baş ağrısı (Kronik PTBA olarak adlandırılır. Ayrıca, post travmatik baş ağrısına yol açan kafa travması, hafif (genellikle hafif travmatik beyin hasarı [hTBH] veya beyin sarsıntısı olarak adlandırılır) ya da orta-şiddetli olarak sınıflandırılabilir[3].

Epidemiyoloji

Post travmatik baş ağrısı , yaygın görülen bir sekonder baş ağrısı bozukluğudur[4]. PTBA'nın hafif TBH (hTBH) sonrasında, orta veya ağır TBH'ya kıyasla daha yaygın olduğu görülmektedir[4, 5].

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temel bileşenlerindendir. Migren için uygulanan bilişsel davranışçı müdahale, gerilim tipi baş ağrılarının tedavisinde kullanılan birçok bileşeni kapsar; ancak migren tetikleyicilerinin tanımlanması ve bunlardan kaçınılmasına özellikle vurgu yapılmalıdır.

Tipik migren baş ağrısının risk faktörleri ve tetikleyicileri arasında uyku bozuklukları, öğünler arasındaki sürenin uzaması, stres, bazı yiyecekler veya gıda katkı maddeleri, içecekler (özellikle alkol ve kafein içerenler) ile kokular bulunur.

Düzenli fiziksel aktivite ile birlikte düzenli uyku ve öğün saatlerini içeren davranışsal değişiklikler, tedavi rejiminin önemli bir parçasıdır ve hastanın migrenleri üzerinde kontrol duygusu geliştirmesini destekler.

Yaygın olarak kullanılan fiziksel, farmakolojik olmayan tedavi yöntemleri arasında termal tedavi (soğuk veya sıcak uygulamalar), kompresyon ve masaj bulunur. [42]. Küme baş ağrısında olduğu gibi, oksijen inhalasyonu akut migren tedavisinde de bir seçenek olarak kullanılabilir[41].

Uyku ve post travmatik baş ağrıları:

Yeterli uyku, travmatik beyin hasarı (TBH) sonrası baş ağrısı bozukluklarının gelişiminde önemli bir rol oynayabilir. Baş ağrılarıyla ilişkili olarak, gelişen duygu durum bozukluğu ya da kafa travmasının akut başlangıçlı belirtilerinden biri olarak TBH sonrası popülasyonda uykusuzluk bildirilebilir.

Travmatik beyin hasarı (TBH) hastalarında REM uykusu azalırken, yavaş dalga uykusunda artış görülür ve akşam saatlerinde melatonin üretimi daha düşük seviyelerde seyreder. [43]. Obstrüktif uyku apnesi, huzursuz bacak sendromu ve uykuda periyodik ekstremite hareketleri, travmatik beyin hasarı (TBH) hastalarında da daha sık görülür. [44]. Uyku bozukluğu, baş ağrısı hastalıklarının kötüleşmesine ve gündüz bilişsel şikayetlerin artmasına katkıda bulunabilir. Ayrıca, uykusuzluğun ağrı kontrolündeki inhibitör mekanizmaları azalttığı da öne sürülmüştür[45].

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BÖLÜM 43

ÇOCUKLARDA VE ADÖLESANLARDA BAŞ AĞRISININ YÖNETİMİ

Binnur ÖZKAR[1]

Baş ağrısı, çocukluk ve adölesan döneminde en sık karşılaşılan somatik yakınmalardan biridir. Yalnızca fiziksel değil, aynı zamanda psikososyal ve bilişsel işlevler üzerinde de olumsuz etkiler yaratabilir. Bu semptom, çocuklarda okul devamsızlıklarına ve yaşam kalitesinde düşüşe neden olabilmektedir. Ancak öğretmenler ve ebeveynler tarafından çoğu zaman yeterince önemsenmemektedir. Bu nedenle, baş ağrılarının değerlendirilmesinde klinisyenlerin kapsamlı ve sistematik bir yaklaşım benimsemesi, doğru tanı ve etkili tedavi süreci açısından büyük önem taşımaktadır (1).

Baş ağrısı doğrudan merkezi sinir sistemi kaynaklı olabileceği gibi, başka organlardaki bozuklukların yansıması olarak da ortaya çıkabilir. Çocukluk çağında görülen primer baş ağrılarının büyük kısmını migren ve gerilim tipi baş ağrısı oluşturmaktadır (2,3). Sekonder baş ağrılarında ise sinüzit, ensefalit, beyin tümörleri, hidrosefali veya kafa travması gibi altta yatan patolojiler söz konusudur. Bu nedenle, başvuru anındaki değerlendirmede öncelikli adım, sekonder nedenlerin dışlanması olmalıdır.

1. Epidemiyoloji

Çocukluk ve ergenlik döneminde baş ağrısı oldukça yaygın bir sorundur ve prevalansı yaşla birlikte artar. Özellikle 13 yaş civarında belirgin bir artış gözlenir. Baş ağrısı prevalansı 7 yaş dolaylarında %37-51 aralığındayken, ergenlik döneminde bu oran %57-82'ye ulaşmaktadır. 10 yaş altındaki kız ve erkek

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GEBELİK VE EMZİRME DÖNEMİNDE BAŞ AĞRISI YÖNETİMİ

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1. Giriş

Gebelik ve laktasyon, hem hormonal değişiklikler hem de dolaşım fizyolojisindeki değişiklikler nedeniyle özel bir dönemdir. Bu nedenle, baş ağrısı gibi semptomların anne ve bebeğin sağlığı açısından dikkatle değerlendirilmesi gerekmektedir. Bu süreçte baş ağrısının ayırıcı tanısı, tedavi kararı ve güvenli farmakolojik yaklaşımlar, nöroloji pratiğinde sık karşılaşılan ve özenle ele alınması gereken durumlardır. Gebelikte gözlenen baş ağrıları genellikle primer tipte olmakla birlikte; ani başlayan ve şiddeti hızla artan gök gürültüsü tarzı (thunderclap) baş ağrısı, semptomatik tedaviye dirençli ısrarcı baş ağrısı, daha önceki baş ağrılarında bulunmayan yeni gelişen eşlikçi semptomlar ve fokal nörolojik defisit gibi "kırmızı bayrak" belirtilerinin varlığında, sekonder nedenlerin ayrıntılı şekilde araştırılması zorunludur.

2. Gebelikte Baş Ağrısının Ayırıcı Tanısı

Baş ağrısı şikâyetiyle başvuran her hastada; ağrının yeri, süresi, şiddeti, tarzı, eşlik eden bulgular (bulantı, kusma, fotofobi, fonofobi, otonom belirtiler vb.), farmakolojik tedaviye yanıt durumu, fiziksel aktiviteyle, öksürük veya Valsalva manevralarıyla ya da pozisyon değişikliğiyle şiddetinin artıp artmadığı, gün içerisindeki seyri, tekrarlayıp tekrarlamadığı, uykudan uyandırıp uyandırmadığı veya uyumakla şiddetinde azalma olup olmadığı gibi faktörler ayrıntılı biçimde

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AĞRILI KRANİYAL NÖROPATİLERİN TEDAVİSİ

Muzaffer TEL[1]

1. GİRİŞ

Ağrılı kraniyal nöropatiler; kraniyal sinirlerin etkilenmesine bağlı olarak gelişen, baş ve yüz bölgesinde şiddetli, paroksismal veya sürekli karakterde ağrılarla seyreden sendromlardır. En yaygın alt tipler arasında trigeminal nevralji, glossofaringeal nevralji ve oksipital nevralji yer alır. Bu tablolar sıklıkla hastaların yaşam kalitesini önemli ölçüde bozar ve klasik analjezik tedavilere yanıt vermeyebilir (1). Bu nedenle, altta yatan patofizyolojinin anlaşılması ve hedefe yönelik, multidisipliner bir tedavi yaklaşımının benimsenmesi önemlidir.

İlk tanımlamalardan günümüze, kraniyal nevraljiler nöropatik ağrı sınıfında ele alınmış, etyolojik nedenlerin çeşitliliği nedeniyle tanı ve tedavide zorluklar yaşanmıştır. Klinik seyir genellikle tekrarlayıcı ve kronik olup, spontan remisyonlar görülebilmekle birlikte çoğu hastada medikal ya da girişimsel tedavi gerekebilir (2). Özellikle vasküler kompresyona bağlı gelişen nöropatilerde mikrovasküler dekompresyon gibi cerrahi yöntemler etkili olabilmektedir (3).

Gelişen görüntüleme teknikleri, hastalığın etiyolojisinin ortaya konmasında ve tedavi planlamasında önemli rol oynamaktadır. Aynı zamanda yeni antiepileptik ilaçlar ve girişimsel tedavi yöntemleri, bu hasta grubunda farmakolojik tedaviye dirençli olgular için umut verici seçenekler sunmaktadır (4,5).

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