Bölüm 12

NÖROMUSKÜLER KAVŞAK FİZYOLOJİSİ VE NÖROMUSKÜLER KAVŞAK HASTALIKLARINDA İMMUNOPATOGENEZ

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GİRİŞ

Çizgili kas plazma membranı ile motor nöron akson terminali arasındaki aksiyon potansiyelinin yani sinir iletiminin aktarımını sağlayan bağlantı yapısına nöromusküler kavşak (NMK) adı verilmektedir.Bu kavşaktaki gerçekleşen elektriksel uyarı iletimi sayesinde çizgili kasın kontraksiyonu sağlanır.NMK ilişkili patolojilerde kaslarda güçsüzlük, solunum zorluğu gibi ciddi nörolojik tablolar ortaya çıkmaktadır.Anestezide kullanılan birçok ilaç grubu da NMK üzerinden sinir iletimi engelleyerek etkisini göstermektedir.Birçok nörolojik hastalık temelinde bu yapıdaki bozukluklar suçlanmakta olduğundan NMK fizyolojisini iyi anlayabilmek büyük önem arz etmektedir. (1,2,3) NMK hastalıkları arasında Miyastenia Gravis (MG),konjenital miyastenik sendromlar, Lambert Eaton Sendrom (LEMS), edinsel botulizm ve periferik sinir hipereksitabilite sendromları sayılmaktadır.Bu hastalıkların çoğunun immunopatogenezinde otoimmunite sorumlu tutulmaktadır ve spesifik otoantikorlar tanımlanmıştır.Nikotinik asetilkolin reseptör antikoru, voltaj kapılı kalsiyum ve potasyum kanallarına karşı gelişen antikorlar gibi birçok antikor saptanmış olan NMK hastalıklarının tedavilerinde, patogeneze yönelik immunoterapi yöntemleri kullanılmaktadır.(4,5)

Nöromusküler Kavşak Fizyolojisi

Medulla spinalis ön boynuz motor nöronlarından miyelinli sinir lifleri çıkar ve bunlar çizgili kası uyarır.Sinir terminali kas lifiyle NMK adı verilen sinapsı yapar.Sinir lifi tarafından ulaştırılan aksiyon potansiyeli NMK aracılığıyla kasa

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