DENEYSEL MULTİPLE SKLEROZ MODELLERİ

BÖLÜM 4

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Giriş

Multiple skleroz, dünya çapında 2,5 milyondan fazla insanı etkilediği tahmin edilen, demiyelinizasyona yol açarak motor, görsel, duyusal ve otonom sistemlerde bozulmayla birlikte nöronal kaybının gerçekleştiği otoimmün bir hastalıktır. MS her hasta için farklı klinik bulgular ve ilerleyiş göstermesi nedeniyle öngörülemez bir durumdur. Sinir lifleri, koruyucu miyelin kılıf ile kaplıdır ve sağlıklı bir sinirde miyelin kılıf oluşan potansiyellerin daha hızlı iletilmesini sağlar. MS hastalığında ise bağışıklık sisteminin hücreleri beyin ve omuriliğindeki sinir liflerine saldırarak miyelin kılıfa zarar verir ve sinir hücrelerinin normal işlevi bozulur. MS'in hayvan modelleri, hastalığın patolojik mekanizmalarını ve tedavilerinin nasıl hedeflenebileceklerini tahmin etmede önemli rol oynar. Merkezi sinir sisteminde inflamasyon, demiyelinizasyon, remiyelinizasyon ve nörodejenerasyonun farklı yönlerini incelemek için oldukça yararlı olduğu kanıtlanan birçok farklı model mevcuttur. Mevcut modeller, MS patolojisinin karmaşıklığını ve heterojenliğini tam olarak yansıtmasa da, MS hastalarının tedavisi için ilaç geliştirilmesinde kullanılmaktadır. En çok kullanılan deneysel hayvan modelleri otoimmün ensefalomiyelit (EAE) ve toksin ve/veya virüs kaynaklı demiyelinizasyondur. Deneysel modeller, EAE, MS sırasında meydana gelen inflamasyon, MSS penetrasyonu, demiyelinizasyon, aksonopati ve bağışıklık hücrelerinin aracılık ettiği nöronal kayıp dâhil olmak üzere çeşitli patolojik süreçleri aydınlatmada etkili olmuştur. Bu bölümde MS araştırmalarında farklı hayvan modellerinin kullanımına ilişkin bilgiler özetlenecektir.

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modelleri, demiyelinizasyon ve remiyelinizasyon hakkında oldukça değerli bilgiler sağlar, ancak sonuçları doğrudan uygulanabilir değildir. Bir modelin veya diğerinin seçilmesi, çalışmanın özel amaçlarına bağlıdır.

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