DENEY HAYVANLARINDA OSTEOARTRİT MODELLERİ

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BÖLÜM

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Osteoartrit (OA) dünyanın en yaygın kronik hastalıklarından biri olup, milyonlarca kişi bu hastalıktan etkilenmektedir. OA, yalnızca eklem kıkırdağını etkileyen kronik bir hastalık değil, aynı zamanda subkondral kemik, sinovyal membranlar ve periartiküler dokularında etkilendiği bir hastalıktır. İnflamatuar olmayan bir hastalık olarak tanımlanmış olmasına rağmen, mevcut kanıtlar inflamasyonun patogenezinde temel bir rol oynadığını göstermektedir. Bu hastalıkla ilgili birçok çalışma yapılmış olup hastalık çok iyi bilinmesine rağmen erken evre OA'in patogenezi tam olarak bilinmemektedir (1). Bu durum erken teşhis ve tedavi yaklaşımlarını sınırlamaktadır. Hayvan deneyleri hem OA'in doğal seyrini hem de tedavisini belirlemek için anlamlı bilgiler elde etmemizi sağlar. Uzun zamandan beri hastalığın erken teşhis ve tedavisini aydınlatmak için birçok kendiliğinden ve uyarılmış deneysel OA hayvan modeli çalışmaları yapılmaktadır. Bu çalışmalarda fareden insana benzeyen primatlara kadar birçok hayvan deneysel çalışmalarda kullanılmıştır. Her modelin kendisine göre avantaj ve dezavantajları mevcuttur (1-5). Araştırmacılar için en önemli zorluk, birçok hayvan modelinden hangisinin yapacakları araştırmaya uygun yöntem olduğunu belirlemektir. Bu çalışmada deneysel OA çalışmalarında kullanılan hayvanlar, geliştirilen modeller ve bu modellerin sonuçları hakkında bilgiler vermeye çalıştık.

DENEYSEL OSTEOARTRİT MODELLERİNDE KULLANILAN HAYVAN TÜRLERİ

Çalışmalarda seçilecek hayvanın yaşı, cinsiyeti, boyutu, üreme özellikleri, saklanma koşulları ve maliyeti önemlidir. Yenilenme kapasitesinin en aza indirilmesi için olgun çağa gelmiş hayvanların kullanılması insanda uygulanabilir bilgiler elde edilmesi için gereklidir. Küçük hayvanların (fare, sıçan, tavşan, kobay) seçilmesi barınma, maliyet, genetik müdahale, daha hızlı OA oluşturulabilmesi ve toplumsal yaklaşım açısından daha avantajlıdırlar. Büyük hayvanlar (köpek, koyun, keçi, at, primat) ise insanlara olan anatomik ve biyomekanik benzerliklerinden dolayı rutin tanısal testlerin uygulanabilmesi, artroskopik girişimlere uygun olmaları biyomekanik çalışmalara elverişli olmaları, biyokimyasal çalışmalar için yeterince doku elde edilebilmesi gibi avantajlara sahiptirler. Bu sebeple küçük hayvan modelleri özgün hastalık mekanizmalarını araştırırken ve tedavi edici ajanların ilk deneysel uygulamalarında seçilmelidir (2,3). Bu modellerde uygulanan tedavilerin etkisi insanla-

Anahtar Kelimeler: Hayvan Modelleri, Osteoartrit, Eklem kıkırdağı, Deneysel Çalışma

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