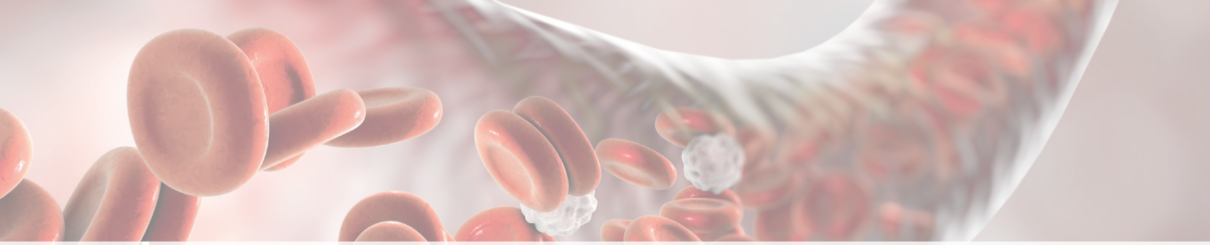

2. Bölüm

İSKEMİ REPERFÜZYONDA DİKKAT EDİLMESİ GEREKEN HUSUSLAR

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Preklinik çalışmalarda fizyolojik ve patolojik mekanizmaları öğrenmek, patolojik mekanizmalara tanı koymak, yeni tanı ve tedavi yöntemleri geliştirmek amacıyla hayvan modelleri oluşturulur (1). Hayvan modeli oluştururken; hayvanın türü, cinsi, yaşı, cinsiyeti ve çevresel faktörler çok iyi belirlenmelidir.

2.1. Tür-Cins

Hayvan türünün seçiminde, elde edilen sonuçların kliniğe uyarlanabilirliği, hayvanın anatomik ve fizyolojik özellikleri göz önünde bulundurulmalıdır. Üreme fizyolojisi ve büyüme hızları iyi değerlendirilmelidir. Seçilen türün yapılacak cerrahi işleme uygunluğu, hayvanın anesteziye dayanıklılığı önceden belirlenmelidir.

Hayvan modeli oluştururken cins ve suş farklılıkları da önemlidir. Bir cinste alınan sonuçların başka bir cinste alınamayabileceği akılda tutulmalıdır. Suşlar arasında derin genetik farklılıklar bulunmaktadır. Özellikle transgenik çalışmalarda, sadece tek gen mutasyonu değil, genetik arka plan da dikkate alınmalıdır. Beyin iskemisi başta olmak üzere iskemi reperfüzyon (İ/R) çalışmalarında doğru sonuç alabilmek için, birden fazla suşun sonuçları değerlendirilmelidir (2).

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verici sonuçlardan sonra, insan dışı primatlarda yapılan çalışmalar (avantajlar: jirensefalik, insan durumuna daha yakın) düşünülmelidir.
2. Cins seçilmelidir. İdeal olarak, sonuçlar diğer cinslerle doğrulanmalıdır.
3. Genç erkek hayvanlar tercih edilebilir (avantajlar: homojenlik, tekrarlanabilirlik). Dişi, yaşlı veya komorbid hayvanlarda ek çalışmalar yapılabilir (avantaj: klinik duruma daha yakın).
4. İ/R modeli seçilmelidir. Seçilen İ/R modeli, beklenen klinik durumla patofizyolojik olarak alakalı olmalıdır ve çalışılan ilaç veya müdahale varsayılan mekanizmasıyla eşleşmelidir.
5. Anestezik ve anestezi yöntemi seçilmelidir. İnhalasyon anestezisi, i.v. veya i.p. ilaç uygulamasına tercih edilebilir. Anesteziklerin İ/R modelinde çalışılacak olan ilaç ile etkileşimine dikkat edilmelidir.
6. Farmakokinetik ve doz-yanıt eğrileri belirlenmelidir. Bunlardan dozaj ve terapötik zaman penceresi hakkındaki bilgiler elde edilebilir.
7. Deney esnasında fizyolojik parametreler kontrol edilmelidir. Özellikle hipotermiden kaçınılmalıdır.
8. Sonuç analizi için iskemik alanın boyutu, fonksiyon skorları, histolojik, biyokimyasal ve moleküler değerlendirme yapılabilir.

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