

DENEY HAYVANLARINDA ALT ÜRİNER SİSTEM DİSFONKSİYONU MODELLERİ VE ÜRODİNAMİK İNCELEMELER

94 BÖLÜM

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Alt üriner sistemin iki ana görevi idrarı depolamak ve aralıklı olarak uygun zamanda boşaltılmasını sağlamaktır. Bu işlevin devamlılığı karmaşık motor ve duysal yolların aktivasyonu ile olur ⁽¹⁾. Refleks yollar ve bilinçli kontrol mekanizmaları, düşük basınçta mesane dolmuna, dolum sonunda doğru mesane basıncının yükselmesine ve sfinkter mekanizmalarının gevşemesi sonrası idrarın boşaltılmasına olanak sağlar ⁽¹⁾.

Bu bölümde öncelikli olarak alt üriner sistemin hayvan modellerinde fonksiyonel olarak incelenmesinden bahsedilecektir. Sonrasında alt üriner sistem disfonksiyonu bulgularına sebep olan hastalıklara ait hayvan modelleri ve bu modellere ait ürodinamik incelemelerin üzerinde durulacaktır.

DENEY HAYVANLARINDA ALT ÜRİNER SİSTEMİN DEĞERLENDİRİLMESİ

Alt üriner sistem deney hayvanlarında insanda olduğu gibi non-invaziv ve invaziv yöntemler ile değerlendirilebilir. Ancak hayvan türünden bağımsız olarak alt üriner sistem fonksiyonunu değerlendirilmesinde en sık kullanılan ve en iyi bilgi veren yöntem ürodinamik incelemelerdir ⁽²⁾.

Non-invaziv inceleme için metabolik ka-

fes-volüm sıklık ölçümü veya spot işeme analizi (voiding spot assay) kullanılır ⁽²⁾. Metabolik kafes deneğin (genellikle fare veya sıçan) serbest dolaşabileceği bir alandır. Deneğin işeme davranışı 24 saat gözlenir. Özel kafesler feçes ve idrar ayırımını yapabilecek şekilde tasarlanmıştır. Bu sayede işenen volüm, işeme sıklığı ve ortalama akım hızı ve alınan su miktarı hesaplanabilir ^(3,4). Spot işeme analizinde ise denek filtresi olan bir kağıt üzerinde gözlemlenir. Bu yöntemde ortalama idrar akım hızı elde edilemez ancak işeme sayısı ve volüm hakkında bilgi elde edilebilir. Ölçümler yapılırken gece ve gündüz döngüsüne dikkat edilmelidir. Normal fizyolojik ölçüm için 4 saat ışık ve 8 saat karanlık ortamda ölçüm yapılması uygundur ⁽⁵⁾.

Ürodinamik incelemenin yapılabilmesi için ilk basamak basınç ölçümü yapabilecek bir kateterin yerleştirilmesidir. Yerleştirilecek kateterin 7 french çift lümenli katater olması tercih edilir ⁽⁶⁾. Deneğe kataterin yerleştirilmesi için genel anestezi altında alt abdomenden vertikal bir kesi yapılır. Fasya geçilip karın açılarak mesane izole edilir. Domdan yapılacak bir insizyondan kateter mesane içerisine yönlendirilir. Basınç kateteri çevre dikişi ile sabitlendikten sonra kateter karın dışına alınarak karın katları ve cilt kapatılmalıdır (Figür 1) ^(7,9).

çalışılacak konu ile ilişkili en uygun modelin belirlenmesi ve ürodinamik incelemelerin modellerin fizyolojik mesane davranışı göz önüne alınarak yorumlanmasıdır.

Anahtar Kelimeler: Alt üriner sistem disfonksiyonu, nörojen mesane, hayvan modelleri

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