1. BÖLÜM

DENEY HAYVANLARINDA KARŞILAŞTIRMALI KALP ANATOMİSİ

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Canlılar, yaşamları boyunca besin maddelerini hücrelere taşımak ve hücrelerde oluşan metabolizma artıklarını uzaklaştırmak zorundadır. Tek hücreli canlılar, özel bir sistem gereksinimi olmadan madde alışverişlerini bulundukları ortama yaparken, filogenetik olarak daha gelişmiş canlılarda bu görevi dolaşım (kardiyovasküler) sistemi gerçekleştirmektedir. Kardiyovasküler sistem, canlının iç dengesinin (hemoastasis) sağlanmasında oldukça önemlidir.

Kardiyovasküler sistem, temel fonksiyonel organı olan kalp (cor), kalpten kanı götüren arterler ve kanı kalbe getiren venler ile bu ikisi arasında bulunan kapiller damarlardan oluşur. Kalbin kasılması (sistol) sırasında kan atardamarlara geçer, sonra kapiller damarlara ve daha sonrada toplardamarlara iletilir. Kalbin gevşemesi (diyastol) sırasında ise kan tekrar kalbe döner. Sıvı halinde bir doku olan kan, damarlar içeresinde devamlı olarak dolaşır. Kompleks sistemlere sahip canlılarda dolaşım sistemi vasıtası ile kan, yaşamsal öneme sahip oksijeni, besin maddelerini, hormon ve antikorları hücre ve dokulara sunar. Hücrelerde oluşan metabolik artıklar ve karbondioksiti uzaklaştırır, organların birbiri ile iletişim ve etkileşimini sağlar. Bunlara ek olarak ısının dağılımından da sorumludur (1, 2).

Tarih boyunca insanlar kendi vücut sistemlerinin nasıl çalıştığını öğrenmek için hayvanlar üzerinde anatomik diseksiyonlar ve deneyler yapmışlardır. İnsan biyolojik sistemlerinde bugün bildiğimiz birçok bilgi hayvanlardan elde edilmiştir. Hayvan ve insan hastalıklarının teşhisi, patogenezi ve tedavisinin yapılması; doku, organ ve sistemlerin normal anatomi ve fizyolojisinin iyi bilmesiyle

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