



Güven AKÇAY¹

Giriş

Beynimiz, görme, koklama, yürüme, koşma, düşünme, hissetme, akıl yürütme, dikkat ve hafıza gibi tüm bilinçli ve bilinçaltı fizyolojik fonksiyonlardan sorumlu organımızdır. Beyin uyku, uyanıklık, bilişsel ve fiziksel aktiviteleri yerine getirebilmek için gerekli düzeyde sürekli olarak oksijene ve enerjiye ihtiyaç duymaktadır. Beyin, vücut ağırlığının % 2'i kadarı olmasına karşın kardiyak kalp debisinin yaklaşık % 20'sini kullanmaktadır. Beyin beslenmesinde serebral kan akımı hayati önem taşımaktadır. Beynin bir bölgesinde veya tümünde serebral kan akımının azalması sonucu serebral iskemiy meydana gelmektedir. Serebral iskemiy, beyni besleyen damarların tıkanması veya kanaması sonucu oluşmaktadır. Dünyada her yıl yaklaşık 17 milyon inme vakası görülürken, ülkemizde de yaklaşık olarak 132.000 inme vakası görülmektedir. Her geçen yıl inme vakaları artmakta ve gelecekte bu durumun sağlıkla ve ekonomiyle ilgili ciddi sorunlara yol açacağı öngörülmektedir. Bundan dolayı inmenin önlenmesi ve etkin tedavi yöntemlerinin uygulanması hayati önem taşımaktadır. Bu tedavi yöntemlerinin araştırılmasında yeni tedavi protokollerinin geliştirilmesi ve yeni ajanların keşfedilmesinde deneysel hayvan modelleri sıklıkla tercih edilmektedir. Klinikteki serebral iskemik vakalarının fizyopatolojisinin araştırılmasında sıklıkla sıçan ve fare gibi kemirgenler üzerinde yapılan geçici global serebral iskemiy, geçici fokal serebral iskemiy ve geçici ön beyin iskemiy modelleri kullanılmaktadır. Bu kitapta; serebral iskeminin epidemiyolojisi, patofizyolojisi ve deneysel serebral iskemiy hayvan modelleri arasında en çok kullanılan orta serebral arter oklüzyon yöntemi ile ilgili bilgiler sunulmuştur.

¹ Dr. Öğr. Üyesi, Hitit Üniversitesi Tıp Fakültesi, Biyofizik AD., guvenakcayibu@gmail.com

reperfüzyon aşaması oluşturmakta ve tedavi yöntemleri reperfüzyon hasarını önlemeye yönelik olmalıdır. Serebral iskeminin tedavi yöntemlerinin gelişmesinde özellikle deneysel çalışmalar büyük katkı sağlamaktadır. Yapılan deneysel patofizyolojik çalışmaların çoğu iskemi sonrası reperfüzyon hasarını önlemek, hastaların iyileşmesini hızlandıracak tedavi yöntemlerin geliştirilmesi üzerine yapılmaktadır İskemi reperfüzyonun tedavisi için yeni ajanların keşfedilmesi ve yeni tedavi protokollerinin geliştirilmesi için deneysel geçici serebral iskemi hayvan modelleri sıklıkla tercih edilmektedir. Bu nedenle deneysel geçici orta serebral oklüzyon modeli serebral iskemi araştırmalarında hayati önem arz etmekte ve yeni tedavi yöntemleri için daha fazla deneysel araştırmalar yapılmalıdır.

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