

BÖLÜM 4

ÇOCUK VE ERGENLERDE UYKU NÖROBİYOLOJİSİ

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Giriş

Uyku, özellikli bir beyin elektrik aktivite modelini içeren, tersinir fizyolojik bir durumdur. Uykunun kontrol mekanizmaları genetik, biyolojik ve hüresel organizasyon düzeyinde kendini gösterir. Bazal ön beyin, talamus ve hipotalamusu da kapsayan birçok beyin bölgesi, uyku aktivitesini düzenlemede rol oynar. Farklı beyin bölgeleri arasındaki ve kortikal bölgelerden perifere olan sinyaller, uyanıklığı veya uykuyu teşvik ettiği bilinen çeşitli nöromediatörler aracılığıyla iletilir. Bunlar arasında serotonin, norepinefrin, histamin, hipokretin (oreksin), asetilkolin, dopamin, glutamat ve gama-aminobütirik asitin uyku nörobiyolojisinin esas mekanizmalarını yönettiği bilinmektedir. Uyanıklık, NREM (non rapid eye movement) uykusu ve REM (rapid eye movement) uykusu arasındaki geçişi ve sürekliliği açıklayan birkaç model öne sürülmüştür. Bu modellerin tümü, uykunun düzenlenmesinde rol alan anahtar merkezler arasında karmaşık/karşılıklı bağlantıda ligandlar olarak nörotransmitterleri içerir. Bununla birlikte, çeşitli çevresel işaretler, uyku-uyanıklık modelini desteklemek için kortikal bölgeler ve periferik dokularla bağlantı kurabilen, suprakiazmatik çekirdekte lokalize, merkezî bir senkronizör ile entegre edilmiştir (1).

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Yine de cevaplanması gereken birçok soru mevcuttur. Bu bağlamda, uykunun karmaşık nörobiyolojisinin daha iyi anlaşılması için daha fazla çalışmaya ihtiyaç vardır.

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