Bölüm 2

Nöroimmün ve Mikrobiota Alanlarının Örtüşme Noktaları

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Özet

Çoklu-disiplinlere dayalı araştırmalar sağlık ve hastalığı belirleyen karmaşık mekanizmaların açığa çıkarılma umudu vaad etmektedir. On yıllar boyunca bilim çalışanları nöroendokrin ve bağışıklık işlevi arasındaki ilişkileri tanımlamaya yönelik araştırmalar yürütmüş olup bunlar şimdi psikonöroimmünoloji (PNI) adı altında bir araya getirilmiştir. Ek olarak, mikrobiyal endokrinoloji disiplini de hastalık olaylarını anlamamıza benzer pekiştirici etkide bulunmuştur. Genetik-tabanlı dizgileme teknolojilerinin gelişmesi ile nöroendokrinimmünoloji-mikrobiyal araştırmaların tıbbi keşifler için gereken bu tür bilgilerimizi daha ileriye götürecek daha fazla kavuşum yapacakları umudu vermektedir. Bu bölümde, mikrobiyota, bağışıklık ve nöroendokrin disiplinlerini birbirine bağlayan kuramsal çatıyı destekleyen güncel bulgular gözden geçirilecektir.

Anahtar sözcükler Mikrobiota, Nöroendokrin, Stres, Bağışıklık, Sağlık

1 Giriş

Biyolojik sistemlerin, karmaşık olmalarına karşın tümleştirilmelerinin sağlık ve hastalık konusundaki bilgilerimizi arttıracağına inanılmaktadır. Psikonöroimmünoloji (PNI) buna bir örnek olup bu başlık altında nöroendokrin ve bağışıklık sistemleri arasındaki mekanik örtüşme noktaları tanımlanmakta ve bu yaklaşım çeşitli hastalıkların etiyolojileri hakkındaki bilgimizde artışa yol açmaktadır [1–3]. Son otuz yıl içinde PNI literatürü genişlemiş, biyomedikal araştırma toplumunu etkilemesi artmış ve artık yerleşik bir disiplin halini almıştır (Şekil 1).

"Bağışıklık Hücreleri Stresin Kendilerine Ne Dediğini Dinliyor" adlı daha önce yaptığımız bir yayında bağışıklık ve merkezi sinir sistemi arasında çift yönlü yolakları tanımlayıcı genel bir yayın taraması sunmuştuk. O günden bu güne kadar, tıpta keşif yapılacak yeni topraklara köprü olmayı vaad eden, farklı disiplinlerin kesiştiği üçüncü bir alan önerilmiş olup bu alan nöroendokrin-bağışıklık ve mikrobiyal sistemleri kapsamaktadır [4, 5]. Bu bölümde, hastalıklarla savaş için disiplinlerarası yaklaşımları teşvikte bir taban olacak nöroendokrin, bağışıklık ve mikrobiyolojik sistemlerin tümleştirilmiş bir perspektifini sunmaktayız.

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