18. Bölüm

COVID-19 GENETİK İLİŞKİSİ

Özlem SEZER[1]

1. COVID-19 enfeksiyonuna genetik yatkınlık var mıdır?
2. SARS-CoV-2 ile karşılaşan herkes enfekte olur mu?
3. SARS-CoV-2 neden tüm vücutta bulgu ve semptomlara neden olur?
4. SARS-CoV-2 enfeksiyonu neden farklı yaşlarda ve cinsiyetlerde farklı klinik semptom ve bulgularla gözlenir?
5. COVID-19 ve doku grubu genleri arasında ilişki var mı?
6. COVID-19 ve immün mekanizma arasında ilişki var mı?
7. COVID-19 ve Vitamin D arasında nasıl bir ilişki var?

GİRİŞ

SARS-CoV-2 enfeksiyonunun geniş kitleleri kısa sürede etkilemesinde yaygın coğrafik değişimler göstermesinde, hastalar arasında gözlenen bulgular, semptomlar ve klinik şiddetin değişkenliğinde, ülkeler ve kıtalar arasında mortalite oranlarının faklı olmasında ve her bireyin **tedaviye değişken yanıtında**; gerek enfeksiyon ajanının gerekse konağın genetik **farklılıklarından kaynaklanabileceği** düşünülmektedir (1,2-35).

SARS-COV-2'NİN GENETİK ÖZELLİKLERİ

SARS-CoV-2'nin de dahil olduğu Koronavirüsler, zoonotik virüslerdir. Ana kaynağı, yarasalar, domuzlar, keçi, koyun, tavşan, köpek ve yırtıcı yabani hayvanlardır (3).

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rına karşı duyarlıdır. Antijenler vücudumuza girdikleri zaman MyD88 ve NF-kB etkilenir; transkripsiyon faktörü olan NF-kB proinflamatuar sitokinlerin salınmasına neden olarak inflamasyonu başlatır. TLR7'de defekt, IFNRF7 yi aktive eder bunun sonucu olarakta tip1 IFN baskılanır, aynı zamanda IFN ile stimüle edilen genlerin aktivasyonu da baskılanmış olur. IFN ve IFN ile stimüle edilen genler, virüsle mücadelede rol oynar ve virüsün daha ağır enfeksiyona neden olmasını engeller (34). TLR7 defekti olanlarda TLR7 aktivasyonunu sağlayan ve HPV enfeksiyonunda verrülerin tedavisinde kullanılan imiquimod (IQ) tedavisinin de etkili olabileceği düşünülmektedir (35).

SONUÇ

COVID-19 enfeksiyonuna yatkınlık ve dirençten kompleks genetik mekanizmalar sorumludur. Hastaların COVID-19 enfeksiyonuna verdiği klinik ve tedavi yanıtı da kişiye özgüdür. Konak genotipinin ve konakçı genotip-fenotip korelasyonunun araştırılması COVID-19 enfeksiyonunun etiyopatogenezini aydınlatmada ve kişiye özgü yeni tedavi stratejilerinin geliştirilmesinde önemlidir.

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