

BÖLÜM 10

ORAL VE PERİODONTAL ENFLAMASYONDA NÖROPEPTİTLER VE NÖROJENİK MEKANİZMALARIN ROLÜ

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GİRİŞ

Enflamasyon; canlı dokunun her türlü canlı, cansız yabancı etkene veya içsel/dışsal doku hasarına verdiği sellüler (hücresel), humoral (sıvısal) ve vasküler (damarsal) tepkiyi temsil eder. Vücudun temel koruyucu mekanizmalarındandır ancak sebep olan durum devam ederse ilişkili doku hasarıyla birlikte kronikleşebilir. Enflamatuvar yanıtın büyüklüğü çok önemlidir; çünkü yetersiz bir yanıt enfeksiyona neden olabilirken, aşırı bir yanıt örneğin romatoid artrit gibi hastalıklarda doku hasarına bağlı olarak morbiditeye neden olabilir. Plak mikroorganizmalarına, özellikle bunların lipopolisakkarit (LPS) bileşenine yönelik enflamatuvar tepkilerin büyüklüğü, dış eti iltihabı ve periodontitisin kapsamını ve süresini belirlemede çok önemlidir.⁽¹⁾

Son yıllarda sinir sistemi, enflamasyonun kritik bir düzenleyicisi olarak tanımlanmıştır.¹ Enflamasyonun vasküler kısmında duyuusal nöronların bir rol oynadığı gösterilmiştir ve sinir sisteminin lokal enflamatuvar yanıtlara katkısını tanımlamak için 'nörojenik enflamasyon' terimi kullanılmaya başlanmıştır.⁽²⁾ Kapsaisin, ısı, protonlar, bradikinin ve triptaz dahil olmak üzere birçok maddenin duyuusal nöronları aktive ettiği bildirilmiştir. Dış uyaranlar (örneğin, fiziksel, kimyasal veya termal), bir duyu siniri terminalinden nöropeptit salımını tetikler; ancak tam mekanizma uyarana bağlı olarak değişir.⁽³⁾ Salgılanan nöropeptitler sinir üzerindeki reseptörleri aktive ederek çeşitli iyon kanallarının (örneğin, voltaja duyarlı Na⁺, mekanosensitif K⁺, L-tipi voltaja bağımlı Ca²⁺ kanalları) açılmasına neden olarak kalsiyumun duyu siniri hücrelerine girmesine izin verir ve depolarizasyon oluşturarak ağrının algılanmasını sağlar.⁽⁴⁾ Son yıllarda, transient reseptör potansiyel (TRP) kanal ailesi üyeleri odontoblastlarda ve dental primer afferent nöronlarda (DPA'lar) da tespit edilmiş ve dış uyaranların dişte ağrı sinyallerine dönüştürülmesinde rol oynadığı bildirilmiştir.⁽⁴⁻⁶⁾

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şan periodontal enflamasyon ise sistemik enflamatuar süreci etkileyerek kronik ağrıyı arttırabilir. Ağrı ve periodontal enflamasyon arasındaki ilişki günümüzde henüz açık bir şekilde ortaya konulmamıştır.

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