BÖLÜM 2

Periferik Ağrı Mekanizması ve Nosiseptör Sensitizasyon

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1. Giriş

Ağrı, organizmayı yaklaşmakta olan veya devam eden doku hasarı hakkında uyaran, koruyucu bir mekanizma işlevi gören, hoş olmayan duyusal, bilişsel veya duygusal deneyimlerin karmaşık bir kümesidir. Ağrı, süreye (akut ve kronik), lokasyona (yüzeysel veya derin; deri, kemik/eklem, kas veya iç organlar) ve nedene (inflamatuar, nöropatik) göre kategorize edilebilir (1). Genel olarak, primer afferent nöronlarda meydana gelen aktiviteler ağrı deneyiminin temelini oluşturur. Buna bağlı olarak, primer afferentler (duyu nöronları) ağrı mekanizmalarını anlamada ve ağrıyı yönetmede kilit oyunculardır. Ağrı oldukça bireysel ve özneldir. Nosisepsiyonun ağrı algısına dönüştürülmesi beklenti ile şiddetlenebilir. Ağrı algısı stres tarafından artabilir veya tehlike anındaki savaş-kaç tepkisinde olduğu gibi azalması da mümkün olabilir (1). Nihayetinde ağrı, işlev bozukluğuna, fiziksel semptomlara, bilişsel bozukluklara veya duygusal tepkilere neden olabilir. Daha da önemlisi, kronikleşen ağrı hastaların hem günlük yaşam aktivitelerini hem de yaşam kalitesini olumsuz etkiler ve uzun süreli disabilitenin en sık nedenidir (2).

Ağrıyı sınıflandırmanın birçok yolu (kaynaklandığı bölge, fizyolojik mekanizma veya süre gibi) vardır. Ağrı mekanizmasına (patogenezine göre) göre nosiseptif ve nörojenik ağrı olarak ikiye ayrılmaktadır (2). Nosiseptif ağrı, zararlı stimülasyon veya doku iltihabı/yaralanmasından kaynaklanır. Nöropatik ağrı, nosiseptif sistemin nöronlarının kendisinde meydana gelen hasar sonucunda gelişir ve nedenleri arasında sinir hasarı, metabolik hastalıklar (örneğin, diabetes mellitus) ve herpes zoster bulunur. Nöropatik ağrı zararlı doku uyarımı sinyali vermez, genellikle anormal (yanma veya elektriksel karakter) hissedilir ve kalıcı veya kısa ataklar halinde ortaya çıkabilir (trigeminal nevralji gibi). Hiperaljezi (ağrılı uyarana verilen aşırı ağrı cevabı), allodini (normalde ağrı hissi oluşturmayacak uyaranların hastada ağrı oluşturması durumu) veya duyu kaybı ile birlikte olabilir (3). Nöropatik ağrı mekanizmaları kısmen nosiseptif ağrınınkinden farklıdır.

2. Periferik Ağrı Mekanizmaları

2.1. Bir Ağrı Uyarısı Sonrası Nosiseptif Süreç

Nosisepsiyon, zararlı/ağrılı uyaranlardan kaynaklanan doku hasarı hakkındaki bilgilerin algılandığı ve beyne iletildiği sinirsel süreçtir (1, 4). Ço-

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