BÖLÜM 2

KAS İSKELET SİSTEMİNDE MEDİKAL OZON TEDAVİSİ

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1840'lı yıllarda keşfedilen ozon gazının klinik kullanımı 19. Yüzyılda yaygınlaşmıştır (1). Ozon gazı solunum sistemi gibi oksidatif strese duyarlı yapılar için yüksek dozlarda toksik olarak kabul edilse de, kontrollü kullanımı ile uygun dozda, medikal tedavide yüz güldürücü sonuçlar elde edilebilmektedir. Tamamlayıcı tıpta vasküler hastalıklar, yaş ile ilişkili maküler dejenerasyon, diyabetes mellitus, kronik enfeksiyöz hastalıklar gibi bir çok alanda elde edilen olumlu sonuçlar literatürde paylaşılmış bulunmaktadır (2). Ozon gazı plazmada çözünebilmesinin verdiği özellikle poliansatüre yağ asitleri (PUFA) ile reaksiyona girebilir ve sonuçta reaktif oksijen türleri (ROS) ardından ozonize lipid ürünleri (LOPs) oluşur. Oluşan bu ılımlı oksidatif stres oldukça güçlü bir antioksidan yanıtı aktive eder. Oksidan sistemlerin uyarılması nükleer faktör eritroid 2 ilişkili faktör 2 (Nrf2)'den sorumlu transkripsiyon faktörünün aktive olmasını ve sonuçta antioksidan savunma sisteminin devreye girmesini sağlar. Bu sayede ozon etkisi ile oluşmuş olan ılımlı oksidatif strese karşılık antioksidan enzimler oldukça yüksek konsantrasyona erişirler(1). Medikal tedavide uygulanan ozon dozunun aralığı oksidan- antioksidan sistemler arası denge düşünüldüğünde oldukça büyük önem taşımaktadır. Tekrarlanan ozon uygulamalarından kazanılan başarı antioksidan sistemin stimülasyonu ile oksidatif strese karşı direncin geliştirilmesi olarak düşünülebilir. Yapılan birçok çalışma ile ozon tedavisi sonucunda antioksidan sistem bileşenlerinde yükselme tespit edilirken, oksidatif stres düzeylerinde düşme gözlendiği literatürde paylaşılmıştır (1-5)

Medikal ozon tedavisinin oksidatif sistemde yarattığı düzenleyici etki yanında anti-enflamatuar etkisi ile sağladığı yüz güldürücü sonuçlar da literatürde paylaşılmış bulunmaktadır (1, 3-5). Endikasyonu bulunan hastalarda uygun dozda

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