Bölüm 17

ENFEKSİYONLARIN TEDAVİSİNDE ALTERNATİF YÖNTEM: FOTODİNAMİK ANTİMİKROBİYAL KEMOTERAPİ

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GİRİŞ

Fototerapi, bir hastalığın tedavisinde ışığın kullanımıdır. Işığa duyarlı bir kimyasal ajanın kullanıldığı fototerapi uygulamaları ise fotokemoterapi olarak isimlendirilir. Fotodinamik tedavi (FDT), ışığa duyarlı kimyasal ajan ile boyanmış olan hedef hücrelerin, mikroorganizmaların veya moleküllerin belirli dalga boyunda ışık ile öldürülmesi prensibine dayanan fotokemoterapi yöntemi olarak tanımlanabilir [(1)].

Fotodinamik antimikrobiyal kemoterapi (Photodynamic Antimicrobial Chemotherapy – PACT), mikroorganizmalar tarafından meydana gelen enfeksiyonların tedavisinde uygulanan girişimsel olmayan güncel ve alternatif bir yaklaşımdır. Fotodinamik antimikrobiyal kemoterapi, "antimikrobiyal fotodinamik tedavi", "fotoaktif dezenfeksiyon", "fotodinamik inaktivasyon", "letal fotosensitizasyon" gibi terimler ile de tanımlanmaktadır [(2,3)].

TARİHÇE

Dünyanın birçok yerinde güneş tanrılarına tapan eski medeniyetler, güneşin hastalıkları iyileştirme gücü olan sağlık getiren bir tanrı olduğu inancına sahipti [(4)]. Bu nedenle bedensel ve ruhsal birçok hastalığın tedavisi amacıyla ışığın kullanımıyla fototerapi uygulaması çok eski tarihlere dayanmaktadır. Antik Yunan, Roma, Mısır, Hindistan ve Uzak Doğu medeniyetleri yüzyıllar önce hastalıkları tedavi etmek için güneş ışığından yararlanmışlardır [(5,6)]. Yunan hekim Herodot, sağlık için güneş ışığının önemini sık sık vurgulamıştır. Antik Yunan medeniyetinde güneş ışığı kullanılarak uygulanan bu tedavi yöntemi "helioterapi" olarak isimlendirilmiştir [(5,7)].

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