

Bölüm 44

DERMATOLOJİDE SPEKTROFOTOMETRİK İNTRAKUTANÖZ ANALİZ (SIASCOPI) CİHAZI VE KULLANIM ALANLARI



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GİRİŞ

SIA sistemleri kullanılarak multispektral dermatoskop görüntülerinin bilgisayar analizi yapılabilmektedir. Işığın farklı dalga boyları derinin değişik katmanlarına ulaşır bu sayede lezyonların farklı derinliklerine ait bilgiler elde edilir. Işığın farklı dalga boylarından alınan bu seri görüntülere multispektral görüntüleme denir. Multispektral dijital dermoskopiler farklı dalga boylarındaki ışıkların deri üzerine düşülüp yansıyan ışınların toplanması ile görüntü elde etmeye yarayan yardımcı tanı araçlarıdır. Burada elde edilen görüntüler yine bu araçlar sayesinde bilgisayar tabanlı bir analiz programında depolanırlar (1,2). Melafind, Solarscan, Siaskopi adında üç cihaz bulunmaktadır (3,4). Siaskopinin diğer iki cihazdan farkı elde edilen görüntülerin hekim tarafından yorumlanmasına bağlı olmasıdır (4,5).

SPEKTROFOTOMETRİK İNTRAKUTANÖZ ANALİZ (SIASCOPI) YÖNTEMİ

Genel Bilgiler

SIAskopi, non invaziv tamamen zararsız ve ağrısız bir inceleme yöntemi olup lezyonların çıplak gözle

yapılan muayenesinin ötesinde bilgiler sağlar (6-9). Deriden yaklaşık 2 mm derine ulaşan, buradan absorbe olan ya da yansıyan ışıklar ile bilgi sağlar. Bu şekilde epidermal ve dermal melanin, hemogloblin, dermal kollajen, kan damarlarının konsantrasyonu, dağılımı ve pozisyonu ve derinin yaş ile ilgili değişiklikleri hakkında bilgiler elde edilir (6-8,10-13). Çeşitli yapı bozulmalarını, pigment, vaskülarite ve kollajen yoğunluğu gibi değişiklikleri göstererek deri kanserlerinin erken tanınmasına yardımcı olur (6). SIAskopi'nin çalışma prensibi deri renklerinin optik tabanlı bir modelini oluşturmaktır. Bu model, ışık spektrumunu içinden deriye yönlendirilen ve absorbe edilmeyen kırmızı-yeşil-mavi renklerin hesaplanması ve derinin optik özelliklerini belirleyen parametrelerin kullanılması ile oluşturulur. Böylece belirli bir doku rengine neden olan histolojik parametreleri ortaya çıkarmak amaçlanır (7). Bu amaç doğrultusunda 10 saniyede cilt taranarak dokudaki melanin, kan ve kollajenin yerleşimi, miktarı ve dağılımı, epidermal-dermal pigment dağılımı, dermoepidermal bağlantı mimarisi, lezyonel mikrosirkülasyon paternleri ve hacimleri hakkında bilgi elde edilir (8,14). Bu bilgiler aracılığı ile lezyonun renkli, total melanin, dermal melanin, vasküler ve kollajen

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