Emerging Trends in Aesthetic Dermatology

Emerging trends in aesthetic dermatology include new scientifically based cosmeceutical skin care products. Over the last few years, there has been increased interest in new approaches to aesthetic dermatology. These developments include growth factor technology and peptides, which induce collagen remodeling, as well as peptides that attempt to inhibit neuromuscular transmission. In addition, new high-potency antioxidant cocktails also are being formulated in an attempt to provide strong UV-induced cell protection. Gene modulation products that attempt to down-regulate the genetic cellular markers of aging by employing gene chip technology represent a novel approach to topical skin care as well. This special Cornell University issue of *Cosmetic Dermatology*® explores several of these novel cosmeceutical approaches.

The concept of noninvasive skin tightening is becoming increasingly popular. Technologies that are in development and others that recently have been introduced induce pandermal heating. This process allows volumetric contraction of collagen bundles in the dermis and deeper tissues, allowing long-term dermal and deep tissue remodeling, as well as collagen tightening. The Polaris™ and ThermaCool™ systems are the first such technologies to be introduced in this setting. Other technologies, including the Titan™, ReFirme™, and LuxIR Fractional™ systems, employ light, radiofrequency, or a combination of these modalities and currently are being used or investigated at standard clinical settings. Included in this issue of *Cosmetic Dermatology* is a discussion of the clinical efficacy of these novel nonsurgical skin tightening approaches.

In addition, effective nonfacial rejuvenation and noninvasive approaches to body contouring and fat lipolysis are major breakthroughs in aesthetic dermatology. Noninvasive procedures to reduce the appearance of cellulite and remove localized fat deposits are in development.

Laser, light, and radiofrequency sources in conjunction with massage, rolling modalities, and traditional suction are the second generation of cellulite reduction techniques. High-energy focused ultrasound technologies that induce thermal heating of adipocytes or induce apoptosis will soon be studied in the United States. Newer treatment approaches include selective photothermolysis of chromophores, which are unique to fat cells.

While these early pioneering approaches are extremely exciting, we must be modest and practice careful observation to be sure that the benefits of these approaches outweigh their risks. It is my hope that this issue is beneficial to practicing dermatologists interested in cutting-edge, next-generation approaches to aesthetic dermatology as they relate to whole body rejuvenation.

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