Mind Your Business: Exploring the Mind/Skin Connection

Dermatologists and mental health professionals can join forces to treat the whole patient.

BY DENISE MANN, MS

The mind and skin are intimately entangled. In fact, this connection is so deep that it has sired a microspecialty—psychodermatology, a camaraderie between many mental health professionals and dermatologists—and a specialty society—the Association for Psychoneurocutaneous Medicine of North America (APMNA).

"The skin and the central nervous system are intertwined, both being derived from the same embryological source," says Adam Friedman, MD, FAAD, an Associate Professor of Dermatology in the Department of Dermatology at George Washington School of Medicine and Health Sciences in Washington, DC. "Therefore, it is not surprising that almost any and all skin diseases can be impacted by changes in the nervous system."

Here's what it looks like: When we are stressed, two systems are activated: the sympathetic nervous system and the hypothalamus-pituitary-adrenal (HPA) axis, says Dr. Friedman, who also serves as the Residency Program Director and the Director of Translational Research at George Washington School of Medicine and Health Sciences. "When this happens a whole host of hormones, growth factors, and stimulants are secreted, all to which skin cells respond, for which they have receptors, and in fact the skin cells themselves can make," he explains. "Furthermore, immune cells also have receptors for these factors to allow them to influence inflammation."

"When someone is going through a stressful period, molecules like cortisol are higher and cause inflammation. This inflammation can break down collagen (causing wrinkles), cause pimples, flare eczema and psoriasis, and damage the skin's barrier," echoes New York City-based Amy Wechsler, MD, who is board-certified in both dermatology and psychiatry.

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It's not always obvious what is the cause and what is the effect, and discerning this requires spending time with each patient to figure it out, says Dr. Wechsler, author of *The Mind-Beauty Connection*. For example, acne can cause psychosocial stress, and stress can exacerbate acne. The same bidirectional relationship can be seen in some cases of psoriasis, atopic dermatitis, and other common skin conditions.

For Dr. Wechsler, double-board certification seemed like a natural progression. "After I trained in psychiatry and child and adolescent psychiatry, I felt that I was only taking care of half of my patients and that I wanted to care for the physical as well as the emotional/mental sides," she recalls. "I thought for a while about which specialty to combine with psychiatry, and dermatology made the most sense, as I loved the thought of taking care of the most external and most internal organs, both of which had multiple interconnections."

Rosacea Awareness

Next month is rosacea awareness month. As the National Rosacea Society (NRS, rosacea.org) ramps up education initiatives, it is emphasizing new findings about comorbidities associated with the skin disease. Patient reports confirm that, as in acne, the experience of the disease may have psychosocial implications for some patients. In surveys by the NRS, more than 90 percent of rosacea patients said their condition had lowered their self-confidence and self-esteem. Forty-one percent reported its effect on personal appearance had caused them to avoid public contact or cancel social engagements. Among rosacea patients with severe symptoms, 88 percent said the disorder adversely affected their professional interactions, and 51 percent said they had even missed work because of their condition.

TEENS, ACNE AND STRESS: A VICIOUS CYCLE

Psychology impacts the management of acne patients in several ways, Dr. Friedman says. "Firstly, the misperception that acne can be cleared overnight by many of the marketing claims of OTC products can further exacerbate the stress associated with acne in the first place, further fueling the inflammation via mechanisms mentioned above," he says. "Stress can also induce pruritus, increasing the likelihood that a teen will pick at his or her acne, worsening inflammation and ultimately increasing the risk of scarring or dyspigmentation."

Moreover, he says, the very same inflammatory mediators associated with acne may pass through the blood-brain barrier and have an organic effect on mentation/psychological status. This is a similar paradigm to what is seen with psoriasis-associated depression and fatigue. "Globally, the stress associated with acne can increase the likelihood of self-imposed social ostracism, further increasing biological stress responses and, in turn, further worsening acne."

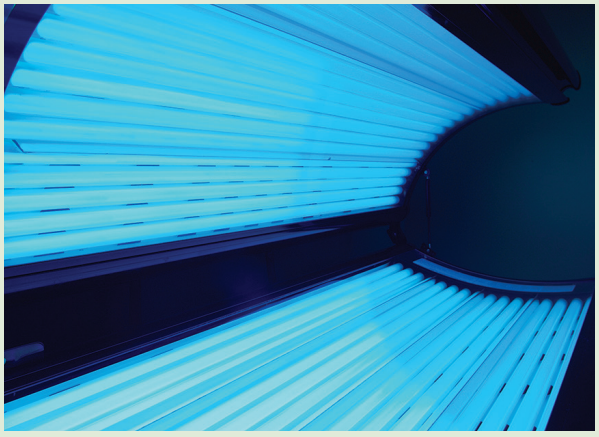
THE TANNING CONUNDRUM

Despite the well-publicized warnings that tanning can cause skin cancer and premature aging, many still tan both indoors and out, and some just never think they are tan enough.

Tanorexia is the unofficial name given to this addiction, which can clearly have dire consequences.

Some individuals looking to alleviate symptoms of seasonal affective disorder (SAD) may also seek out indoor ultraviolet (UV) tanning, but the Skin Cancer Foundation warns that it does not treat the disorder. "It does not mimic the spectrum of UV/Vis/IR light provided by natural sunlight," Dr. Friedman says. "We know that a good number of individuals develop seasonal affective disorder due to the impact winter sun exposure (or lack there of) on the circadian rhythm and more specifically melatonin secretion," he says. "The treatment of choice is not baking in artificial sun, rather treating this as one would any depression with cognitive behavior therapy and antidepressants." Light therapy can be used, but only in a

Stress and Tanning



A survey of adolescent girls (N = 229), designed to assess sunbathing and indoor tanning, shows that many use tanning beds to modify their appearance and enhance a sense of well-being (*Psychol Health Med*;21(5):618-24). Hierarchical regression analyses showed that appearance motives and well-being motives were independently positively associated with sunbathing. Social motives were negatively associated with sunbathing. The authors concluded that, "Researchers and healthcare professionals who work with adolescents should attend to tanners who are motivated for both appearance and mood-related reasons, as they may be most at risk for tanning dependence and skin cancer."

Another study evaluated psychiatric and addictive symptoms among college age women who tan indoors (*Health Psychol Res.*;4(1):5453). Results showed that, overall, participants reported significant decreases in both negative (upset, scared, irritable, nervous, jittery, afraid) and positive (feeling interested) mood states after their most recent tanning episode. The analysis found that "indoor tanners report relatively high rates of psychiatric and substance use symptoms, including symptoms of tanning dependence, and indoor tanning appears to alter mood."

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controlled setting due to the safety issues surrounding UV, he warns.

WHAT COMES NEXT

Psychodermatolgy is in its infancy in the US, and much more research is needed to elucidate some of the many mind-skin connections. "Some prominent dermatologists are studying the effects of stress on both skin and immune cells," Dr. Friedman says. "Common skin conditions are certainly impacted by our nervous system and therefore identifying appropriate targets could be integral to disease management."

ARE DOCTORS MISSING THE BDD BOAT?

Nearly one in 10 facial plastic surgery patients may have body dysmorphic disorder (BDD), but plastic surgeons correctly identified it in less than five percent of patients who screened positive.

Researchers screened nearly 600 patients who sought facial plastic surgery consultations at three medical sites over 11 months. Patients were given a specialized questionnaire that determined if they had BDD. Despite how commonly the psychiatric condition was identified by the questionnaire—almost 10 percent of patients screened positive—only four percent of patients had been suspected of having the problem by plastic surgeons, the study found. The findings were published in in *JAMA Facial Plastic Surgery*.

In a related study published in the February issue of *Plastic and Reconstructive Surgery*, researchers surveyed Dutch plastic surgeons, dermatologists, and others regarding their knowledge of and experience with BDD. Responses were received from 173 professionals who perform cosmetic procedures.

DSM-IV Diagnostic Criteria for Body Dysmorphic Disorder

- Preoccupation with an imagined defect in appearance. If a slight physical anomaly is present, the person's concern in markedly excessive.
- The preoccupation causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- The preoccupation is not better accounted for by another mental disorder (e.g., dissatisfaction with body shape and size in Anorexia Nervosa).

Most of those surveyed said they were familiar with BDD and the criteria used to diagnose it. About two-thirds said they had encountered one to five patients with BDD in their practice over the past year. (By comparison, studies have reported that BDD is present in about two percent of the general population, and in up to ten percent of patients seeking cosmetic procedures.)

About 70 percent of survey respondents said they would refuse to perform cosmetic procedures in a patient they suspected of having BDD. Plastic surgeons were more likely to refer patients to a psychiatrist or psychologist and to refuse treatment in a patient with BDD, compared to the other groups of professionals, the study showed.

Results from both studies indicate an "apparent underdiagnosis" of BDD. ■