Dermatology: A Specialty That Exemplifies the Osteopathic Medical Profession

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Even though the tradition of osteopathic medicine is based in primary care, more osteopathic graduates than in the past are pursuing subspecialties within medicine. Some claim that medical specialties, such as dermatology, compromise osteopathic principles and philosophy. However, the authors contend that dermatology exemplifies the ideals expressed by Andrew Taylor Still, MD, DO, and explain how osteopathic manipulative treatment and the principles of osteopathic medicine can be applied to dermatologic disease and patient care.

J Am Osteopath Assoc. 2011;111(5):335-338

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Since its inception, osteopathic medicine has focused on primary care areas such as pediatrics and family practice. However, as osteopathic medicine has grown, so has its expansion into the medical and surgical specialties. From cardiology to orthopedic surgery, osteopathic medicine has embraced the need for specialists within the medical community. Even so, some argue that the trend toward specialized medicine has been at the expense of osteopathic principles and practice.1 In particular, we have observed that the specialty of dermatology has been criticized for lacking osteopathic distinction because of the misconception that dermatology is a narrowly focused field in which osteopathic manipulative treatment cannot be used. In the present article, we elucidate how dermatology is a complex specialty that incorporates osteopathic principles into its approach to patients and exemplifies the legacy of osteopathic medicine.

Tradition of Osteopathic Medicine
In 1892, Andrew Taylor Still, MD, DO, founded osteopathic medicine as a solution to his frustration with the medical system during his time. He formed the term osteopathy by combining 2 Greek roots—osteon- for bone and -pathos for suffering—to convey his belief that physiologic dysfunction could be traced back to a disruption in the musculoskeletal system.2 Central to osteopathic medicine are the following 4 major principles,3 which have governed the osteopathic medical profession to this day:

1. The body is a unit, and the person represents a combination of body, mind, and spirit.
2. The body is capable of homeostasis, self-healing, and health maintenance.
3. Structure and function are interrelated.
4. Rational treatment is based on an understanding of these principles: body unity, self-regulation, and the interrelationship of structure and function.

In addition to these principles, osteopathic medicine also uses physical manipulation, known as osteopathic manipulative treatment (OMT), within the greater context of osteopathic manipulative medicine as a means to treat patients with various diseases.3

Dermatology as an Osteopathic Medical Specialty
Dermatology is younger than most specialties within osteopathic medicine. For example, organizations such as the American Osteopathic College of Radiology, founded in 1941,4 and the Osteopathic College of Ophthalmology and Otorhinolaryngology (now the American Osteopathic Colleges of Ophthalmology and Otalaryngology-Head and Neck Surgery), founded in 1944,5 were uniting specialists in osteopathic medicine before the American Osteopathic College of Dermatology (AOCDO) was established in 1957.6

During the past half century, the AOCDO has certified 315 osteopathic dermatologists in the United States.6 Osteopathic dermatology residency training consists of a postgraduate, traditional internship year followed by a 3-year dermatology residency program accredited by the AOCDO and the American Osteopathic Association’s Bureau of Osteopathic Specialists.7 Currently, there are 20 osteopathic dermatology residency programs within the United States.6 Osteopathic dermatologists are trained not only in medical dermatology but also in der-
matologic surgery and lasers, pediatric dermatology, dermatopathology, and cosmetic dermatology.

Dermatology as an Illustration of OMT and the Osteopathic Principles

A summary of OMT and the osteopathic principles as they relate to dermatology is presented in the Figure.

Dermatology and OMT

As with many internal diseases, the treatment of patients with dermatologic diseases can be enhanced by the application of OMT. Few osteopathic dermatologists implement OMT into their daily practice, but that does not negate the potential benefit of OMT for cutaneous disease. Dermatoses with a neurologic component can be complicated by abnormal spinal mechanics. Based on the mechanism of disease, how OMT might modify it, and our clinical experience, primary hyperhidrosis aggravated by autonomic dysfunction may improve from OMT directed at normalizing the sympathetic chain. Patients with dysesthesia syndromes, such as brachioradialis pruritus, which is often blamed on cervical rib or cervical nerve root impingement, and notalgia paresthetica, which has also been linked to nerve impingement, may benefit from manipulation of the spine. Stasis dermatitis secondary to lower extremity edema may improve with techniques aimed at increasing lymphatic drainage. Although the office climate of a dermatology practice may not accommodate the daily use of OMT, a referral to an OMT specialist may offer useful adjunctive therapy for several cutaneous diseases that are challenging to treat.

Dermatology and the Osteopathic Principles

Principle 1. The body is a unit. This osteopathic principle emphasizes the role of disease on one’s mind or psyche, and vice versa. Undeniably, skin disorders have a profound psychological impact on the whole person. The dermatologist encounters this relationship daily through various scenarios—for example, a teenage girl with acne vulgaris who fears ridicule from her peers; a middle-aged man with psoriasis who refuses to be seen in public; or an Indian patient with vitiligo who feels culturally devastated because the disease carries a strong social stigma. Dermatologists must always consider the effect that a patient’s dermatosis may have on his or her psychological state when providing treatment. Many dermatologists employ official surveys, such as the Dermatology Life Quality Index, or disease-specific questionnaires, such as the Psoriasis Disability Index, to assess the intangible effects of a patient’s disease and help guide treatment.

In turn, the osteopathic principle of the body as a unit also demonstrates that a person’s mental state can cause or exacerbate disease. Many cutaneous diseases, such as delusions of parasitosis, have a psychological component as the primary cause or as a contributing factor. Dysesthesia syndromes, such as pruritus vulvae and scroti and burning mouth syndrome, may have a psychogenic etiology. Anxiety, obsessive-compulsive disorders, and depression can also complicate skin disease, as seen in acne excoriee, neurotic excoriations, and trichotillomania. Results of some studies suggest that depression is a modulating factor for physical stimuli such as pruritus, and factitial skin diseases may signify an underlying psychiatric illness.

The field of cosmetic dermatology also addresses the relationship between physical appearance and the psyche. Some patients have realistic expectations of improving their appearance, and treatment may enhance their self-esteem. Others, however, have unrealistic perceptions about their physical flaws, which may be pathologic, as in the case of body dysmorphic disorder. Dermatologists must be adept in recognizing such patients and treating them accordingly.

Overall, the mind has a powerful role in dermatology and is related to cutaneous disease on multiple levels; this relationship exemplifies the osteopathic principle of the body as a unit.

Principle 2. The body is capable of homeostasis, self-healing, and health maintenance. This osteopathic tenet holds that the body has a powerful ability to contribute to healing and emphasizes the need for prevention to maintain health. At the foundation of many dermatologic diseases is a disruption in the immune system. From autoimmune blistering diseases to connective tissue diseases, dermatologists seek to help the body regain its ability to self-regulate and self-heal, primarily through the use of immunomodulatory therapies, including immunosuppressive drugs and ultraviolet light therapy.

Several dermatologic diseases resolve on their own in an immunocompetent host without direct medical intervention, exemplifying the body’s innate ability to heal. Insect bites, viral exanthems, and molluscum contagiosum will eventually recede after time. Granuloma annulare, pityriasis rosea, and lichen striatus are other examples of dermatologic diseases that are typically self-limited.

Prevention, another key osteopathic precept, stems from the osteopathic principle of self-regulation and health maintenance. Dermatologists advocate photoprotection to prevent skin cancer and photoaging. Through education, patients are encouraged to undergo skin examinations—those performed by a dermatologist and self-examinations.

Dermatologists routinely implement the osteopathic principle of self-regulation and health maintenance by recognizing the essential role of the immune system in cutaneous disease and treatment and by promoting disease prevention.

Principle 3. Structure and function are interrelated. This concept in osteopathic medicine stems from Dr Still’s belief that disruption in function, particularly at the musculoskeletal level, can cause and exacerbate disease. For several dermatologic diseases, such as brachioradialis pruritus and notalgia paresthetica, abnormalities within the spine may contribute to
Osteopathic Approach in Dermatology

- Osteopathic Manipulative Treatment
  - Patients with skin conditions may benefit from osteopathic manipulative treatment as adjunctive therapy

- Principle 1. The body is a unit.
  - Skin disease may affect the mind
  - The mind may cause or exacerbate cutaneous disease

- Principle 2. The body is capable of self-regulation, self-healing, and health maintenance.
  - Some skin diseases have an immunologic basis for pathogenesis
  - Self-limited skin diseases illustrate the body’s ability to heal
  - Skin disease can be actively prevented

- Principle 3. Structure and function are interrelated.
  - Defects in skin structure result in skin disease

- Principle 4. Rational treatment is based on an understanding of the 3 main principles.
  - Examining the patient as a whole
  - Cutaneous signs of internal disease

Dermatologic Disease

- stasis dermatitis, primary hyperhidrosis, brachioradialis pruritis, notalgia paresthetica
- acne vulgaris, psoriasis, vitiligo, melasma
- delusions of parasitosis, trichotillomania, dysesthesia syndromes, pruritis
- psoriasis, atopic dermatitis, vitiligo, alopecia areata
- pityriasis rosea, granuloma annulare, erythema toxicum neonatorum, lichen striatus
- nonmelanoma skin cancer, melanoma
- bullous impetigo, bullous pemphigoid, pemphigus vulgaris, epidermolysis bullosa variants
- acne vulgaris, psoriasis, occupational dermatoses, dermatomyositis
- acanthosis nigricans, recurrent dermatophyte infections, eruptive xanthomas, pruritis

Figure. Summary of osteopathic manipulative treatment and osteopathic principles applied to patients with common dermatologic diseases.

pathogenesis. Dermatology epitomizes the relationship between structure and function. Several cutaneous diseases result directly from a disruption in skin structure that leads to abnormal skin function. Atopic dermatitis, caused by a defect in filaggrin, results in functionally impaired skin that is dry and sensitive to insult at gross examination. The heterogeneous family of epidermolysis bullosa also demonstrates how defects in the basement membrane can lead to different phenotypes of blistering and scarring. Many autoimmune dermatoses, such as pemphigus vulgaris, bullous pemphigoid, and dermatitis herpetiformis, target structural proteins and result in dysfunctional skin. Sweat gland dysfunction or obstruction results in diseases, such as miliaria or Fox-Fordyce disease. Bacterial infections, such as staphylococcal scalded skin syndrome and bullous impetigo, affect molecules that are essential to normal skin function. A dermatologist’s understanding of cutaneous disease and function is deeply connected to the underlying structure of the skin, reinforcing the osteopathic notion that structure and function are intimately connected.

Principle 4. Rational treatment is based on an understanding of these principles. This principle describes the osteopathic approach to medicine, which is to evaluate and treat the whole person. Treating the whole patient requires attention to detail and to all aspects of the patient for accurate diagnosis and successful treatment. Dermatology is an all-encompassing specialty in which every part of a person’s history, review of systems, and physical examination findings may provide diagnostic clues. Most importantly, the physical examination is the heart of dermatology, with many diseases diagnosed based on clinical appearance alone. Dermatologists are taught not only to look but also to touch most skin eruptions, using tactile perceptions to assist in diagnosis.

In treating the whole patient, dermatologists recognize that a cutaneous disease may be a sign of internal disease.
Acne vulgaris is not simply an adolescent nuisance but may represent the result of a hyperandrogenic state. Generalized granuloma annulare, recurrent dermatophyte infections, or clear cell syringomas may be a presenting sign of diabetes mellitus. The first sign of a malignancy may appear with a cutaneous manifestation such as paraneoplastic pemphigus, dermatomyositis, or pruritus ani. Dermatologists also recognize that some skin diseases put a patient at an increased risk for other comorbid conditions. When evaluating a patient with psoriasis, the dermatologist acknowledges the association between psoriasis and the metabolic syndrome, collaborating with the patient’s primary care physician for complete care.

To treat the whole patient, dermatologists evaluate the psychological impact of a disease, the relationship between structure and function resulting in cutaneous disease, and the body’s ability to self-regulate. They routinely apply the osteopathic principle of rational treatment to care for patients effectively.

Conclusion
As more osteopathic physicians choose to specialize, some fear that this trend may compromise osteopathic principles and practice. However, as illustrated in the present article, the specialty of dermatology is inherently osteopathic. Dermatology is a multifaceted specialty based on the treatment of the whole person with the integration of the body as a unit, the relationship between structure and function, and the body’s ability to heal. The evolution of the osteopathic profession into dermatology has not been at the expense of the osteopathic philosophy but rather to its benefit. Dermatology exemplifies Still’s approach to medicine and provides a unique opportunity to implement osteopathic training into daily practice.

References