

[IMAGE]

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The Yang and Yin of Facial Acupuncture, Part 2

Hormonal and Other Factors Contributing to the Decline of the Skin

By Mary Elizabeth Wakefield, LAc, Dipl. Ac., MS, MM and Belinda Anderson, PhD, MAOM, LicAc

Editor's note: This article is part two in a three-part series by Ms. Wakefield and Belinda Anderson, PhD, MAOM, LAc on the multiple aspects of facial acupuncture.

Part one appeared in the June 2006 issue of *Acupuncture Today*. Part three will be published in the December 2006 issue.

In the first article of this series, we examined theories regarding the biomedical mechanisms involved in facial acupuncture and likewise considered skin aging from the standpoint of Oriental medicine. We discovered that, despite the seeming disparities between the two perspectives on reality embodied in these approaches, the reductive paradigm of Western science versus the integrative philosophy of the East, there were compelling points of contact between their individual conceptions of the role of the skin, pointing the way to potential therapeutic synergies.

In this installment, we will continue our investigations into these parallel disciplines and delve somewhat deeper into the processes that contribute to the decline of this, the body's largest organ, including inflammatory response, photo-aging, and, in particular, hormone levels.

Processes Associated With Skin Aging - Western Biomedical Model

Aging is associated with a change in the structure of the skin. It takes longer for cells to mature and hence cells may be shed from the skin quicker than they are being replaced. This results in thin, friable skin, which is more easily injured and damaged. The fat cells underneath the dermis begin to atrophy, providing less padding and a more drawn appearance. The blood circulation to the skin may become impaired, thereby reducing the amount of oxygen and nutrients that are delivered to the skin cells. The collagen and elastin fibers lose their elasticity, leading to sagging, folding of the skin and wrinkle formation. Sweat- and

oil-secreting glands atrophy, depriving the skin of the protective water-lipid emulsions, which leads to dry and scaly skin. Deeper wrinkles, such as frown lines and crow's feet, also form because of small muscle contractions and habitual facial expressions. Gravity exacerbates the situation, causing sagging of the skin in the formation of jowls and drooping eyelids.

Micro-inflammatory Response

Several physiological processes have been proposed to be associated with aging. The micro-inflammatory model describes the cascade of molecular responses that occur in tissues after triggering by things like cigarette smoke, UV radiation, electromagnetic fields, infections, pollution, alcohol consumption, stress, trauma and hormonal imbalances. The end result of this molecular cascade is the production of highly reactive oxygen species (free radicals) and degradative enzymes that damage the extracellular matrix and surrounding tissues, thereby accelerating degradation of the skin.

Photo-Aging

Exposure to the sun induces a range of changes to the skin called photo-aging. These changes include the formation of wrinkles, skin roughness and dryness (leathery texture), irregular pigmentation (brown spots), warty growths called keratoses, freckling, a yellow discoloration due to abnormal elastic tissue and various carcinomas. Overall, exposure to ultraviolet radiation accounts for approximately 90 percent of the symptoms of premature aging. Sunlight damages collagen fibers and causes the formation of abnormal elastin. Large amounts of enzymes called metalloproteinases are produced, which can degrade collagen and cause the formation of solar scars. Free radicals also are produced, which damage cells and molecules.

Female Hormonal Response

As women age, declining estrogen levels are associated with various skin changes. The effects of estrogen deprivation on skin are thought to include wrinkling, dryness, atrophy, laxity and poor wound healing. These effects are due to several physiological changes that take place in the skin which include decreased skin moisture, lipid content, thickness, collagen content and degenerative changes in dermal elastic fibers. The ability of hormone replacement therapy to improve these skin qualities is controversial.

The Oriental Medical View of Skin Aging

In Chinese medicine, the progress of skin aging is considered to relate to two components: first, the landscape of *qi*, blood and fluids, and, secondarily, the effect of climatic factors. The technical nomenclature of Western biomedicine (e.g., collagen and elastin molecules, atrophied sweat glands, UV rays, etc.) becomes less relevant.

When acupuncture needles are placed at crucial junctures in the facial terrain, the flow of fresh blood ensues, which immerses the area being treated. This enhanced circulation of *qi* and blood transports increased nutrients and oxygen to the site of the insertion of an acupuncture needle as a "positive" injury; the result is to "plump up" the tissues and fat cells by the production of greater levels of collagen and elastin (although there have yet to be any scientific studies to support this).

Because certain types of facial acupuncture treatments address not only acupuncture points, but also the facial muscles, they are considered to have a beneficial effect upon sagging skin. This gradual (and seemingly inevitable) downward slide of the facial landscape is in no small part due to the impact of many decades of the Earth's gravitational pull upon the individual human organism. However, a constitutional approach to the problem reharmonizes the functioning of the entire person, striking at the root causes of aging itself, rather than merely seeking to eliminate their traces in the complexion by whatever cosmetic means available.

As we learned in the last article, Oriental medicine regards the skin as a "third lung," with its protective function embodied in the *Wei qi*. External climatic factors (e.g., damp, heat, cold, wind, etc.), while immediately impacting the Lung/Large Intestine, also manifest outwardly on the skin. Other detrimental influences include the long-term consequences of exposure to the sun, airborne pollution, cigarette smoke and other toxins.

However, one of the most significant contributory causes to the premature aging of women's skin is the decline in the production of estrogen and progesterone, and other related hormones. Accordingly, we will focus our attention in the next article on this particular aspect of the aging process as it is understood within Chinese medicine.

Resource:

- Low, Royston, PhD, D. Acu., ND, DO. *The Secondary Vessels of Acupuncture*. Thorson's Publishing Group, U.K. (out of print).

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