

Fascial Neuromodulation: clinical application of the extraordinary meridians for stress, pain and posture

Acupuncture has been proposed to treat chronic pain and others stress-related diseases through modulating the imbalance between sympathetic and parasympathetic activities, restoring the homeostasis: it has shown that acupuncture can induce an adaptive brain state, improving resilience, in case of chronic dysautonomia.

There are several similitudes between the ancient concepts of Chinese medicine and the western medicine based on the psycho-neuro-endocrine-immunology: like the relationship between yin and yang, the homeostasis is a complex dynamic equilibrium in a constant adaptive response to internal or external stimuli.

The extracellular matrix ECM, in the same way of acupuncture meridians, is the bridge between the musculoskeletal system, the viscera and the brain, since meridians are located in the fascial layer of the body, together with neurovascular bundles. In my purpose the TCM description of the so-called "Biao-Li connection" between the skin and deeper structures of the whole body-mind, operated by the 15 "Luo channels" on the arms and by the extraordinary vessels along the extensive path of the body, both running in the "space between skin and muscles", is consistent with the neuroanatomical organization of the extracellular matrix ECM, including the free ending fibers linked to the interception.

While the ECM integrates neural, endocrine, cardiovascular and immune functions, the increase of the extracellular matrix, which is the first measurable alteration of the ongoing change of the body composition, is a consequence of accumulation of catabolic substances and local acidosis, that follow the hyperactivity of the stress system and that lead to formation of trigger points and chronic pain, through alteration of the sensory and autonomic fibers located in the membranous layer of the superficial fascia.

While the threshold of the neuromuscular spindle is under the activity of the autonomic nervous system, an hyperactivity of the sympathetic nervous system leads to muscular tension, formation of the trigger points, especially in the upper district like trapezius and thorax muscles, altering also the biomechanical function of the diaphragm, with a negative loop on emotions and on the homeostatic balance.

The eight extraordinary meridians are considered useful to establish the homeostatic balance: on this basis I am proposing a methodology based on clinical and instrumental assessment of the autonomic nervous system, the postural chains and the extracellular matrix, finalized to choice combinations of acupoints along the extraordinary meridians.

Gianluca Bianco MD

Research Laboratory of posturology and neuromodulation RELPON

Istituto di formazione in agopuntura e neuromodulazione IFAN