ABSTRACT BOOK ABSTRACTS



A new ERA for global Dermatology 10 - 15 JUNE 2019 MILAN, ITALY

QUALITY OF LIFE, QUALITY OF CARE, AND PATIENT SAFETY

## BETTER UNDERSTAND TACTILE ABILITY AND SKIN NEUROLOGICAL DISORDERS WITH AGING TO IMPROVE LIFE QUALITY OF ELDERLY

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Sensory loss with age is one of the reasons for the impaired quality of life of aged patients. The decrease of tactile ability induces functional and sensorial disorders, disconnecting the elderly from their skin and emotions induced by touch. The aim of this work was to characterize the decrease in tactile acuity with aging, determine its causes in order to restore the emotions linked to touch, awaken the skin and improve the quality of life of elderly.

We have developed an original and new evaluation methodology adapted to dynamic touch. Using this methodology in a first study, we characterized two clusters of elderly with (low performing) and without (high performing) decrease in tactile ability compared to young. While the mechanical properties of finger skin, as moisture, elasticity and tactile friction, change drastically with age, this is not the primary reason for the decrease in tactile ability. We were able to identify in a second study the underlying mechanisms behind this declined sense of touch, and relate it to a decreased somatosensory function. Two groups of elderly participants were selected based on identification as with tactile ability low performing or high performing. The density of Meissner Corpuscles (MC) was measured using a confocal microscope as a simple, non-invasive measurement of the somatosensory condition. MC are generally held to be the most important of the mechanoreceptors used in gentle touch on glabrous skin. It was found that the higher performing group had a statistically higher MC density. These new findings open new field to explore skin aging through peripheral nerves signaling.

Reawakening touch is part of a new well-being strategy. We believe that touch dysfunctions with aging and life quality of elderly can be improved by using specific cosmetic products.



24<sup>TH</sup> WORLD CONGRESS OF DERMATOLOGY MILAN 2019



**International League of Dermatological Societies** *Skin Health for the World* 

