



CONTACT DERMATITIS AND OCCUPATIONAL DERMATOSES

## **OCCUPATIONAL STRESS OF ANESTHESIA: EFFECTS ON SKIN AGING AND TELOMERE LENGTH.**

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**Introduction:** The present study hypothesized that chronic psychological stress may lead to skin aging, telomere shortening in anesthetists who are exposed to chronic occupational stress.

**Methods, Results:** A prospective study was carried out on 160 physicians 30-50 yrs. Physicians were categorized into two equal groups, group A (80) were anesthesia physicians and group B (80) were physicians in less stressful specialties (laboratory specialties). Physical health and emotional well-being were evaluated. All physicians were exposed to validated assessment scales for the upper face and the lower face for skin aging analysis. Blood sampling were drawn from all physicians during their working hours for analysis of telomere length, markers of oxidative stress and cortisol level.

**Results:** There were no statistically significant differences between the two studied groups as regards demographic data and years of work. Physical health score ( $p=0.0021$ ) and emotional health score ( $p=0.0013$ ) showed statistical significant higher values in Group A than Group B. upper and lower face aesthetic unit summary score showed statistical significant higher values in Group A than Group B ( $p=0.014$ ) and ( $p=0.036$ ) respectively. Telomere (TTAGGG) repeats for terminal restriction fragments (TRF) of group A individuals revealed a statistically significant decrease of TRF compared to group B ( $p=0.001$ ).

**Conclusions:** Biological and skin aging is evident in anesthetists who are chronically exposed to occupational stress, with obvious shorter telomere length, higher lower and upper face scores, higher stress hormone and free radicals.





Learning Objective:

Telomere length and aging

Upper and lower face skin scores and aging

Stress hormones and aging

Free oxygen radicals and aging

Takeaway Message:

Chronic occupational stress ,as experienced by Anesthesiologists, accelerates skin aging, shorten telomere length and elevates stress hormone levels as well as oxygen free radicals.

