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Evaluation of the skin redermalization effects by injection combination of hyaluronic and succinic acids by shear wave elastography (2D-SWE).
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Aims and objectives
The elasticity of the skin is one of the most important parameters of its health or aging, as well as evaluating the effectiveness of procedures with intradermal injections – redermalization (RD). There are many terms of aesthetic medicine and cosmetology that characterize exactly the mechanical properties of the skin: elasticity, rigidity, stiffness, density, tone, flabbiness, plasticity and others. However, objective instrumental methods for quantitative measurement of these fundamental parameters of the skin are rarely used in everyday practice [1-3]. Cosmetologists and clients themselves use mostly...
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Methods and materials
The skin thickness and stiffness at the rear wrists and cheeks were evaluated in 7 subjects (1 male and 6 women, age 28-55 years) on both sides. Real-time 2D-SWE of the skin performed by US machine Soneus P7 (Ultrasign, Ukraine) with conventional broadband linear 5-12 MHz probe . . The unique property of equipment is the absence of the elastography "dead zone" in the dermis under the contact surface of the probe aperture. All subjects underwent three procedures of the skin RD by Hyalual booster...
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Results
The skin thickness of the rear wrists was initially: on right 1.4±0.5 mm, on left 1.1±0.3 mm. After the RD it was on right 1.1±0.3 mm, on left 0.9±0.3 mm ($p>0.05$). The skin thickness of the cheeks was initially: on right 1.6±0.2 mm, on left 1.7±0.5 mm. After the RD it was: on right 1.6±0.3 mm, on left 1.8±0.4 mm ($p>0.05$). The skin stiffness of the rear wrists was initially: on right 13.9±5.3 kPa, on left 13.9±3.3 kPa. After the RD it was: on right:...
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Conclusion
The results of the RD can find an explanation in the properties of the HA+SA combination to influence on the skin metabolic (plastic and energy) processes and the hydrophilicity of the ECM. One of the SA key point is the ability to block reactive oxygen species (ROS). SA shows antioxidant activity . As is known, ROS are the basis of the theory of skin aging (Inflamejding). The HA+SA mixture has a positive effect on the control of the clinical inflammation, which is proved by the...
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