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Application of conditioned media hair follicle stem cell as a combination therapy in acne scar revision: A case series

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Atrophic scarring is frequent complication of acne, resulted from aberrant remodeling of the extracellular matrix (ECM) in pilosebaceous units of skin. Many combination of treatment is needed in lifting atrophic scar by inducing collagen synthesis. Human hair follicle stem cell (HHF-SC) has reported for having capability of fibroplasia induction. Culturing in conditioned medium will make this stem cell secreting factors known as secretome or exosome which is able to mimic the beneficial effects of stem cell therapy. To experimentally find the effect of human hair follicle conditioned medium (HHF-CM) as a combination of atrophic scar revision post acne vulgaris, first we measured grading of atrophic scar according to global acne scarring classification and skin elasticity using Elastometer™ in three patients. We gave topical anesthesia application 30-45 minutes before treatment, then we did subcision and microneedling. After that, we injected of HHF-CM in sites of scar. These patients were given topical antioxidant with HHF-CM after treatment. This procedure is re-applied after a month and we measured the improvement of acne scar grading. There as improvement in atrophic acne scar's grading with this combination therapy within a month.

Biography

Anggana Rafika Paramitasari is a Dermatovenereology Resident of Sebelas Maret University, Surakarta, Indonesia.

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