

GLOBAL SKIN HEALTH

SKIN MICROBIOTA ALTERATION LINK TO SKIN SYMPTOMS AFTER SOAP CLEANSING

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Introduction: Face cleansing is an important daily gesture that allows oils, dirt, sebum to be washed from the skin. However, whereas mild cleanser is recommending, cleansing using soap that can diffuse into the stratum corneum layer of the skin and disturb ordered lipid and cellular structures might be detrimental.

Objective: The objective of the clinical trial was to investigate the time needed for skin and its microbiota to recover after soap cleansing.

Materials and Methods: a group of 30 healthy volunteers aged 30-50y, comparable in terms of photo ageing and chronological skin aging was evaluated before and after soap cleansing. Total bacterial load was evaluated by QPCR (V1-V3 16S rRNA KAPA Biosystems kit with SYBER Green) and bacterial community using Next generation sequencing (Amplification V1-V3 on Illumina MiSeq platform). In addition, skin clinical evaluations and self-assessments were recorded along during this clinical trial.

Results: Instrumental evaluation including skin hydration, barrier function and pH are altered just after cleansing and recover within 6 hours. Clinical expert evaluation and self-assessment revealed that soap cleansing increases dryness, roughness and discomfort and these skin alterations do not recover even after 6 hours. This soap wash decreased the quantity, the bacterial richness and evenness (alpha diversity) and bacterial communities (beta diversity). In addition, skin bacteria load and alpha and beta diversity are not as clinical signs at all recovered after 6h.

Conclusion: All these important findings show that it is important to propose a skin routine that will firstly clean by respecting the diversity of skin microbiota secondly will feed the skin microbiota and facilitate its recovery. This routine will preserve overall skin quality.