

ACNE, ROSACEA, AND RELATED DISORDERS (INCLUDING HIDRADENITIS SUPPURATIVA)

## MONITORING OF MICROCOMEDONES IN ACNE PATIENTS UNDER COSMETIC SKIN CARE

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**Background:** Microcomedones (MC) can be visualized on cyanoacrylate skin surface biopsy (CSSB), and are the very initial expression of the acne lesion cycle. Little is known on the MC status in patients under topical, non prescription, skin care.

**Objective:** Analyse (i) evolution of the MC-index over 48 weeks in patients with mild to moderate acne using a cosmetic care before, during or after prescription drugs; (ii) variation in key protein constituents of MC identified as targets by proteomics and transcriptomics.

**Materials and Methods:** A single-centre observational longitudinal study conducted under Helsinki ethical rules with written informed patient consent. Patients with acne (n=16) were followed for 48 weeks. CSSB was performed at each visit. The MC index was (% of hair-follicles with MC) x (mean-size of MC on a 0-4 scale). Clinical acne severity was evaluated at each visit by PGA and lesions counts. A topical skin care cosmetic, based on a Silybum marianum fruit extract was applied during the whole 48 weeks (678 weeks for all patients), while prescription drugs were used only for short periods in some patients (total weeks-on for all patients: topical clindamycin 34 weeks; oral doxycycline 34 weeks; limecycline 40 weeks).

**Results:** The MC index decreased by 53% from baseline at 4 and 8 weeks, then by 71%, 75%, 76% at 12, 24 and 48 weeks respectively. There was a high correlation between the MC index and the number of non-inflammatory lesions. Key target proteins such as FIAF, PLIN2, CIDEA, K15, K79, analysed by WB in 89 samples, showed trend variations.

**Conclusions:** A cosmetic skin care contributes to inducing low levels of MC index and the maintenance of stable clinical remission in acne.