

Safety and Efficacy of Retinsphere® Technology and Biopep-15 in the Treatment of Acne in Asian Population

Ma Teresita G Gabriel^{1*}, Kristen Therese A. Whaley²

¹Chairman, Department of Dermatology, Research Institute for Tropical Medicine, Alabang, Muntinlupa City, Philippines

²Chief Resident, Department of Dermatology, Research Institute for Tropical Medicine, Alabang, Muntinlupa City, Philippines

***Corresponding Author:** Ma Teresita G Gabriel, Chairman, Department of Dermatology, Research Institute for Tropical Medicine, Alabang, Muntinlupa City, Philippines

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Many cosmeceuticals have emerged through the years in the management of Acne. Its availability to consumers has led patients to try various over the counter acne products before they are seen by dermatologists. Although topical retinoids are still the first line in the management of mild to moderate acne, many acne sufferers would not tolerate its local side effects such as irritation, erythema, dryness and desquamation.

In this study evaluating the efficacy of a product containing 2 topical retinoids based on Retinsphere® technology and Biopep-15 (Biretix Duo), results showed a decrease in the lesion count and median sebumeter values, with minimal adverse events, as well as improved patient's quality of life. The importance of tolerability in ensuring patient's compliance with acne treatment has paved the way for treatment success. It has long been established that the pathology in acne is a result of an interplay between four factors: follicular epidermal hyperproliferation with subsequent plugging of the follicle, excess sebum production, the presence and activity of the commensal bacteria *Cutibacterium* acnes, and inflammation. Thus, a product that will address all of these pathologic mechanisms will be an excellent option in acne management.

In this regard, Biretix Duo uses Retinsphere® and Biopep-15 as its active ingredients. The Retinsphere® technology uses two topical retinoids: retinol and hydroxypinacolone retinoate, and is capable to act as a penetration enhancer allowing a slow release of the active ingredients, while being able to minimize the side effects related to retinoid treatment. Biopep-15, on the other hand is a botanical complex found to possess broad spectrum antimicrobial activity against *Cutibacterium* acnes. Biopep-15 is combined with 0.5% Salicylic acid, a comedolytic and keratolytic agent. Vitamin E is a known lipid-soluble antioxidant that

helps calm inflammation and prevent free-radical damage. This topical product we have evaluated targets the four main processes that contribute to the development of acne. Will it therefore be more suitable to recommend this regimen, especially for acne patients with sensitive and intolerant skin?

In a similar trial by Veraldi et al (2016), they have evaluated the combination of Retinol, Hydroxypinacolone retinoate (Retinsphere), an antibacterial agent (Biopep-15), Salicylic Acid and Vitamin E in subjects suffering from predominant comedonal acne- an Italian multicenter Prospective Open study. Biretix Duo gel was applied once or twice daily for a total of 90 consecutive days. A comparison of non-inflammatory (NI-L) and inflammatory lesions (IL) from baseline and after 30, 60 and 90 days showed significant reduction of NI-L from 30 ± 14 at baseline to 22 ± 11 at day 30, to 16 ± 8 at day 60 and to 12 ± 8 at the end of the study period (a -60% vs. baseline) ($p=0.0001$; Wilcoxon Test). The same results were seen in IL with significant reduction from 10 ± 4 at baseline to 7 ± 4 at day 30, to 5 ± 4 at day 60 and to 3 ± 3 at day 90 (a -70% vs. baseline) ($p=0.0001$; Wilcoxon Test). In addition, the global skin tolerability score was also calculated on the basis of erythema, desquamation, burning and xerosis. There was a reduction in the mean global skin tolerability score from 1.14 at day 30 to 0.26 at the end of the study. With this promising results, the authors have concluded that Biretix Duo gel has shown to be a very effective and well tolerated treatment of mild to moderate acne reducing both non-inflammatory and inflammatory acne lesions and could be considered a suitable first-line treatment for predominant comedonal acne.