

M89, A COMBINATION OF 89% VICHY VOLCANIC MINERALIZING WATER AND HYALURONIC ACID APPLIED ONCE DAILY FOR 4 WEEKS IS EFFECTIVE AND WELL TOLERATED AFTER AGGRESSIVE LASER PROCEDURES FOR SKIN REJUVENATION

Elena Elena Araviiskaia¹, Martina Kerscher², Julieta Spada³, Cecilia Orlandi⁴, Maryna Anfilova⁵, Sonya Abdulla⁶, Catherine Delva⁷, Delphine Kerob⁸, Monika Arenbergerova⁹, Masha Sviatoslav Tuz¹⁰, Jerry Tan¹¹

¹Department of Dermatology, First Pavlov State Medical University of St. Petersburg, St. Petersburg, Russian Federation, ²Division of Cosmetic Science, University of Hamburg, Germany, ³Clinica Dra Julieta Spada. Dermatología y Estética, Buenos Aires, Argentina, ⁴Clinica Orlandi, Santiago, Chili, ⁵Department of Skin and Venereal Diseases, National Pirogov Memorial Medical University, Vinnytsya, Ukraine, ⁶Dermatology on Bloor, Toronto, ON, Canada, ⁷SyriaStat Lancrenon, Bourg-la-Reine, France, ⁸Vichy Laboratories, Levallois Perret, France, ⁹Department of Dermato-venereology, Third Faculty of Medicine, Charles University, Královské Vinohrady University Hospital, Prague, Czech Republic, ¹⁰Sharapova Clinic, Samara, Russian Federation, ¹¹Western University, Department of Medicine and Windsor Clinical Research Inc, Windsor, Canada

INTRODUCTION

Aggressive lasers may result in transient local side effects, such as erythema, blistering, crusts, scaling, due to the alteration of skin barrier, which could ultimately lead to hypo or hyperpigmentation or even scarring.¹⁻⁶

M89 containing 89% Vichy volcanic mineralizing water and hyaluronic acid in a minimalist formulation was developed to reinforce the skin barrier and to protect against exposome factors.⁷⁻¹⁰

Recent interim analysis of this large international study conducted in subjects with inflammatory dermatoses or having undergone dermatological procedures confirmed the benefit and excellent tolerance of M89.¹¹

AIM

The aim of this poster is to present the efficacy and tolerability of M89 after 4 weeks of daily use in the subgroup of adult subjects having undergone aggressive laser procedures (ALP).

METHODOLOGY

A large international, multicenter observational study has been conducted in subjects either with facial dermatoses or post procedures, who received M89 once or twice daily for 4 weeks. The subgroup of 179 subjects treated with aggressive laser procedures (ALP) defined as resurfacing laser, CO2 laser, Fractional and Erbium lasers were analyzed. Data about demographics, skin characteristics, subject efficacy perception, tolerance, and investigator satisfaction were collected after 4 weeks. Subjects scored their satisfaction after 1 and 4 weeks of use.

RESULTS

Data from 179 subjects from 22 countries were available for this subgroup analysis; 89.9% of the subjects were women; the mean age was 42.3±10.1 years. Subjects had phototypes I-V with a majority of types II-IV. Immediately after ALP, 52.5% of subjects had erythema, 45.8% desquamation and 57.5% irritation. At baseline, on a scale from 0 to 10, subjects scored skin dryness 5.5±2.8, burning 3.2±3.3, itching 2.4±3.0 and stinging/tingling 2.7±2.9; 65.7% considered their skin insufficiently hydrated.

Subject demographics and skin characteristics are provided in Table 1. Incidence and severity of post-ALP clinical signs are given in Table 2.

After 4 weeks, dermatologists assessed that the proportion of subjects with erythema, irritation, desquamation at baseline who showed a significant improvement ($p < 0.0001$) was 82.0%, 82.5%, and 88.9% respectively. Figure 1 shows shifts from severity stages from study start to end of study for clinical signs.

Figure 2 shows mean symptom scores at study start and end of study for the same population. The percentage of subjects having reported dryness, burning, pruritus, stinging/tingling at study start had decreased by 60.1%, 73.4%, 62.5% and 80.5% respectively; 71.7% reported a significant improvement of skin hydration (all $p < 0.0001$).

At study end, 99.4% of subjects were satisfied with the texture of M89 with a mean satisfaction score of 9.1±1.4 out of 10. After applying M89 for one week, 89.8% reported soothed or very soothed skin increasing up to 98.9% until week 4; investigator satisfaction was high or very high in 98.9% of subjects.

Tolerance was rated as good or very good by 99.4% of subjects.

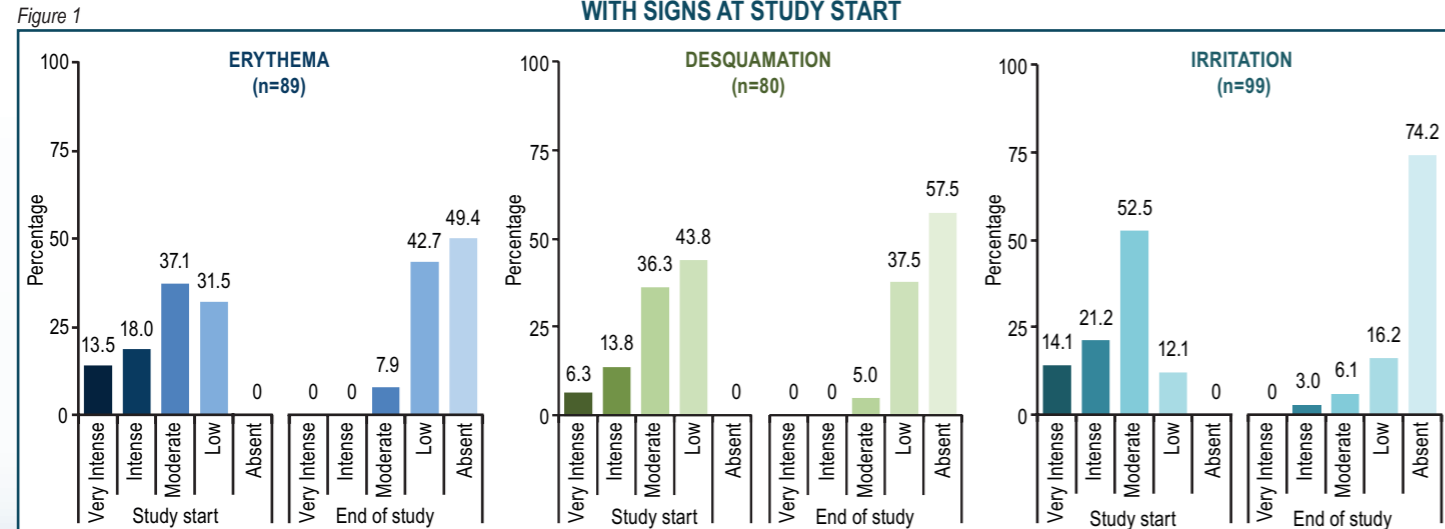
DEMOGRAPHICS AND SKIN CHARACTERISTICS

Table 1	Total	
	n	%
Gender	178	100
Female	160	89.9
Male	18	10.1
Age	171	100
Mean ± SD	42.3 ± 10.1	
Median	41.0	
Min;Max	19.0;65.0	
Phototype	178	100
I	6	3.4
II	67	37.6
III	82	46.1
IV	21	11.8
V	2	1.1
Skin type	179	100
Very dry	21	11.7
Dry	58	32.4
Normal	48	26.8
Combination	40	22.3
Oily	11	6.1
Very oily	1	0.6
Sensitive skin	178	100
Yes	98	55.1
No	80	44.9

CLINICAL SIGNS ASSESSED BY THE INVESTIGATORS AT STUDY START

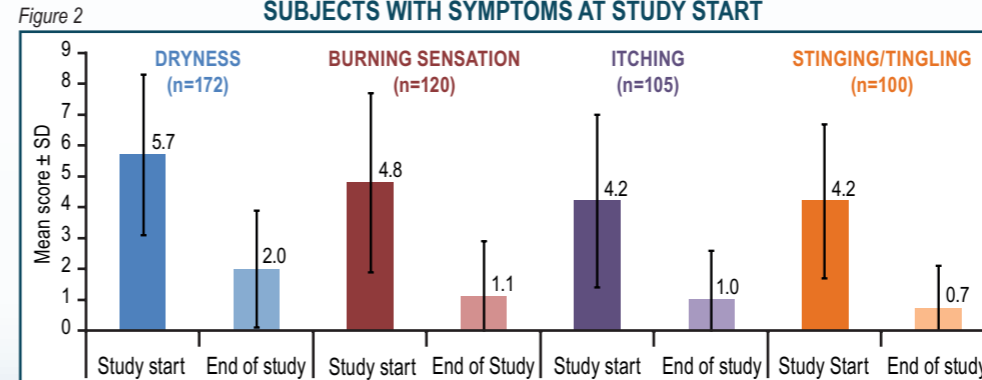
Table 2	Total	
	n	%
Erythema	176	100
Very intense	12	6.8
Intense	17	9.7
Moderate	33	18.8
Low	29	16.5
Absent	85	48.3
Desquamation	177	100
Very intense	5	2.8
Intense	11	6.2
Moderate	29	16.4
Low	35	19.8
Absent	97	54.8
Irritation	175	100
Very Intense	14	8.0
Intense	21	12.0
Moderate	52	29.7
Low	12	6.9
Absent	76	43.4

SHIFT OF SEVERITY GRADES OF CLINICAL SIGNS (% OF SUBJECTS) FROM STUDY START TO STUDY END IN SUBJECTS WITH SIGNS AT STUDY START



The difference in prevalence of subjects with improved clinical signs was statistically significant ($p < 0.0001$) after 4 weeks compared to study start.

MEAN CLINICAL SYMPTOM SCORES AT STUDY START AND AT END OF STUDY FOR SUBJECTS WITH SYMPTOMS AT STUDY START



The decrease of mean scores at study end was statistically significant ($p < 0.0001$).

CONCLUSION

Daily use of M89 for 4 weeks in subjects post aggressive laser procedures is well tolerated and effective in improving clinical signs and symptoms induced by the procedure

REFERENCES

- Sadick NS, Cardona A. Laser treatment for facial acne scars: A review. *J Cosmet Laser Ther.* 2018;20(7-8):424-35.
- Kaushik SB, Alexis AF. Nonablative Fractional Laser Resurfacing in Skin of Color: Evidence-based Review. *J Clin Aesthet Dermatol.* 2017;10(6):51-67.
- Kim YJ, Lee HS, Son SW, Kim SN, Kye YC. Analysis of hyperpigmentation and hypopigmentation after Er:YAG laser skin resurfacing. *Lasers Surg Med.* 2005;36(1):47-51.
- Goldberg DJ. Current trends in intense pulsed light. *J Clin Aesthet Dermatol.* 2012;5(6):45-53.
- Chung H, Goo B, Lee H, Roh M, Chung K. Enlarged pores treated with a combination of Q-switched and micropulsed 1064 nm Nd:YAG laser with and without topical carbon suspension: A simultaneous split-face trial. *Laser Ther.* 2011;20(3):181-8.
- Avram DK, Goldman MP. The safety and effectiveness of single-pass erbium:YAG laser in the treatment of mild to moderate photodamage. *Dermatol Surg.* 2004;30(8):1073-6.
- Nusgens BV. [Hyaluronic acid and extracellular matrix: a primitive molecule?]. *Ann Dermatol Venereol.* 2010;137 Suppl 1:S3-8.
- Burke KE. Mechanisms of aging and development-A new understanding of environmental damage to the skin and prevention with topical antioxidants. *Mech Ageing Dev.* 2018;172:123-30.
- Hughes MC, Williams GM, Baker P, Green AC. Sunscreen and prevention of skin aging: a randomized trial. *Ann Intern Med.* 2013;158(11):781-90.
- Nonotte I, Montastier C, Boisnic S, Branchet-Gumila MC, Breton L. Inhibitory effect of Lucas spring water on substance P induced inflammation in organ culture of human skin. *Nouv dermatol.* 1998;1:535-42.
- Tan J, Spada J, Orlandi C, Kerscher M, Anfilova M, Abdulla S, et al. Vichy mineralizing water with hyaluronic acid is effective and well tolerated as an adjunct to the management of various dermatoses and after esthetic procedures. *J Cosmet Dermatol.* 2020;19(3):682-8.

Funding

This study was funded by Vichy Laboratories, France.

Conflict of interest

Delphine Kerob is an employee of Vichy Laboratories France. Jerry Tan, Martina Kerscher, Julieta Spada, Cecilia Orlandi and Elena Araviiskaia were members of advisory boards organized by Vichy Laboratories, France. The other authors have no conflict of interest to disclose.

Acknowledgments

The authors acknowledge the participation of the investigators and patients, Karl Patrick Göritz, SMWS France for the writing and Dominique Poisson for art work support.