



Nd:YAG Laser Therapy for Genital Psoriasis: A Case Report

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Introduction:

Genital psoriasis represents a therapeutic challenge because of the sensitivity of the affected area, the impact on quality of life, and the limited tolerability of long-term topical treatments. Although topical corticosteroids and other anti-inflammatory agents may provide symptom relief, their prolonged use in the genital region is often restricted. Laser-based treatments may offer a localized, non-pharmacological approach by targeting inflammatory and vascular components of psoriatic plaques while preserving the epidermis.

This clinical note describes the use of a long-pulsed 1064 nm Nd:YAG laser in a patient with persistent genital psoriasis symptoms. The Nd:YAG laser was selected because of its ability to penetrate deeply into the dermis and interact with the inflammatory and vascular components of psoriatic plaques while sparing the epidermis, which is particularly important in sensitive anatomical areas such as the genital region.

Laser	SP Dynamis	
	Step 1	Step 2
Wavelength	1064 nm (Nd:YAG)	1064 nm (Nd:YAG)
Handpiece	R33	R33
Fluence	10 J/cm ²	70 J/cm ²
Mode	Frac3	PIANO
Pulse duration	0.6 ms	Long pulse (5 s)
Passes	6 passes	5 passes (brushing)
Spot size	4 mm	9 mm
Cooling	none	none
Sessions	Two sessions per week, a total of 4 sessions	



Dr. Natasha Teovska Mitrevska is a dermatology specialist at ReMedika General Hospital, North Macedonia, with over 15 years of clinical experience. She is an Assistant Professor at the International Balkan University in Skopje and holds an MPH and a PhD in Clinical Medicine. She is the country representative of the International Union against Sexually Transmitted Infections (IUSTI) and holds leadership roles in national dermatovenereology/STD societies.

Dr. Teovska Mitrevska is an advanced trainer for Fotona lasers, and lectures nationally and internationally in dermatology and aesthetic medicine. She is involved in regional and European professional initiatives, including EADV task forces, and has served as a jury member of AMWC.

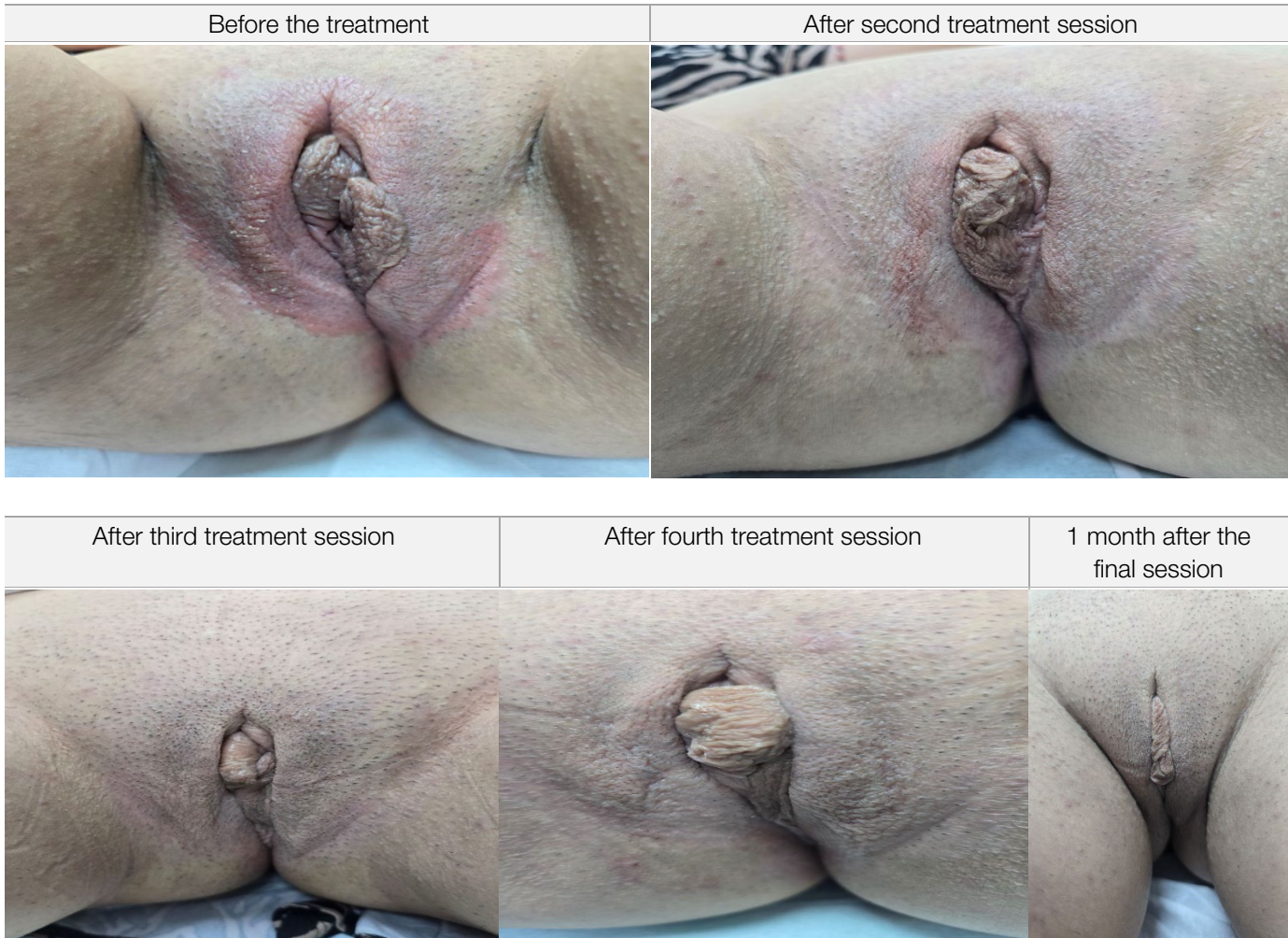
CLINICAL CASE:

A 35-year-old female patient with a 5-year history of chronic plaque psoriasis affecting the genital region, presented with persistent erythema, scaling, pruritus, and a burning sensation. Previous management included low- to mid-potency topical corticosteroids and emollients, resulting in only transient improvement with frequent relapse. The patient declined systemic therapy.

Treatment was performed using a combined Nd:YAG laser protocol. FRAC3® mode was applied first, followed by PIANO® mode using brushing passes. The parameters were selected to achieve a gradual clinical response while maintaining good tolerability in a sensitive anatomical area. The practical treatment endpoint was visible reduction in erythema without epidermal damage or excessive discomfort. Four treatment sessions were performed at twice-weekly intervals. No topical anesthesia was required. During the treatment period, the patient did not use emollients or topical medications. The procedure was well tolerated, and no post-treatment downtime was required.

Clinical improvement became evident after the third session, with marked reduction in erythema and scaling, and improvement of subjective symptoms, including pruritus and discomfort. No adverse events were observed, including no pigmentary changes, blistering, erosions, or scarring. The clinical improvement persisted during a 2-month follow-up period after the final session. The patient reported high satisfaction with both symptom relief and cosmetic outcome.

The therapeutic effect of Nd:YAG laser in genital psoriasis may be attributed to its ability to penetrate deeply into the dermis, inducing photothermal and photobiomodulatory effects. These effects may include modulation of inflammatory pathways and reduction of pathological dermal vascularity, while sparing the epidermis. This mechanism is particularly relevant in sensitive anatomical areas, such as the genital region, where minimizing epidermal injury and downtime is essential.



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