

Palpable Purpura: An Uncommon Side Effect of Alexandrite Laser Hair Removal

Dear Editor

A 40-year old woman was visited at our clinic with a history of palpable purpura appearing after alexandrite laser (Apogee 5500 Alex, 15mm spot shot, 755 nm wave length, 18 j/cm² fluence) hair removal. The skin lesions were located bilaterally on the lower extremity (Figure1). Other physical examinations were unremarkable. The patient had no history of taking medications, underlying systemic diseases and family history of collagen-vascular diseases. Blood biochemical analysis was normal and all the tests for collagen-vascular diseases were negative. The patient declined skin biopsy. After six weeks of conservative therapy, the purpura faded.

Laser-assisted hair removal has recently become popular. The number of lasers and light sources currently available for hair removal and their various treatment protocols has created much confusion; but, the fact is that all photoepilation systems target follicular melanin. Therefore, all hair removal devices provide a significant opportunity for epidermal and dermal injury during the epilation process¹.

Alexandrite laser system can produce a number of side effects including transient erythema, perifollicular edema, treatment pain, hyperpigmentation, hypopigmentation and crusting^{2,3}. Other rare side effects of this laser are folliculitis, erosions and purpura¹. The extent of these complications is determined by skin type, seasonal variations, and patient's history of recent sun exposure. Complication rates also vary according to the anatomic location treated. The extremities are most commonly affected. Blistering, fine epidermal crusting, hypopigmentation and purpura are experienced more commonly in darker skin tones (phototypes III and higher) or in tanned skin¹.

The prominent point of our report was the appearance of purpura in a patient with skin phototype II and in a sun protected area. This report indicates that it is essential for the laser operator to be well educated upon the potential



Figure 1. Multiple purpuric lesions on the lower leg after laser hair removal.

risks of photoepilation and to have a thorough understanding of laser-tissue interaction before embarking upon the laser-assisted hair removal process. (*Iran J Dermatol* 2010;13: 62-63)

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Received: March 7, 2010
Accepted: May 22, 2010

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