

David H. McDaniel, MD, Kim Beckman, MS, Cathy A. Slater, MD, MPH, and John Newman, MD

Striae, or stretch marks, are a type of atrophic scar. Stretch marks are a very common skin disorder that are considered unsightly and undesirable to a majority of those afflicted. Two types of stretch marks exist: *Striae rubra*, recent or “immature” stretch marks that usually present with a red and slightly elevated appearance; *Striae alba* (mature stretch marks) are those typically seen with a depressed atrophic epidermis with lighter or darker pigmentation.

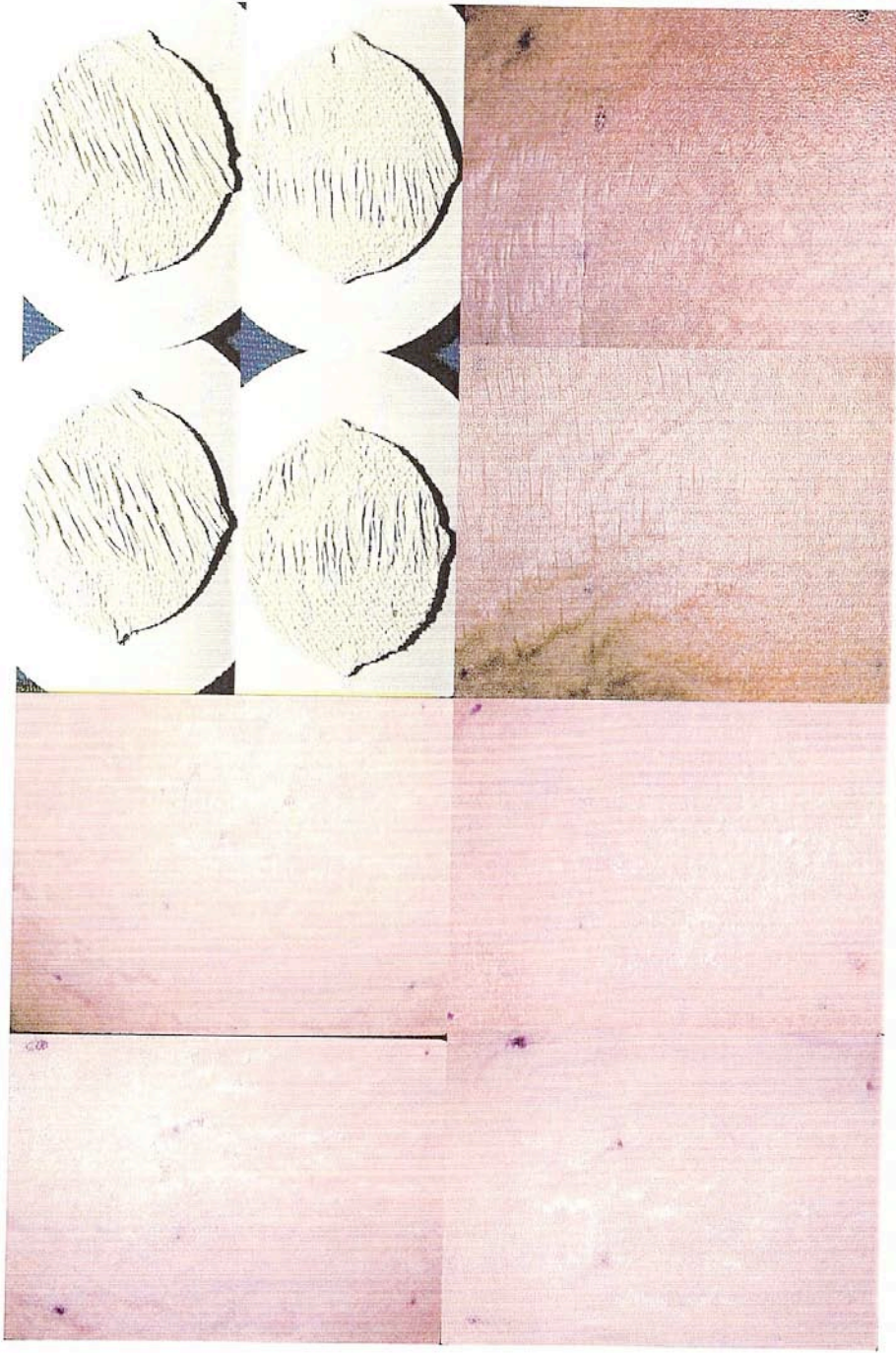
In a recent study, 29 female patients representing all Fitzpatrick skin types and with striae alba (average duration of 12 years) were treated using a positive pressure microdermabrasion system with sodium chloride as the abrasive (Salt A-Peel™, Med-Aesthetic Solutions, Inc). Matching sides of the body in mirror symmetry were treated with this device. Subjects received six treatments over a 12-week period. In addition, one side only also received treatment using a novel new topical cosmeceutical. Lateral thighs, hips and abdomen were anatomic sites treated. The topical agent was applied immediately post treatment and once daily to the treated site on the same side for the entire 12-weeks of the study. Subjects were tattooed to ensure accurate placement of the data analysis devices.

Data analysis consisted of blinded photo grading, elasticity meter measurements, digital and silicone profilometry, TEWL, moisture meter, biopsies with histometric analysis for elastin and GAG and epidermal thickness, high-resolution ultrasound, and other data.

The study results demonstrated an overall improvement in the appearance of the stretch marks of 39% using microdermabrasion alone and 44% with the combination of microdermabrasion and topical agent. Elasticity meter analysis revealed a 2.3% improvement with the device alone and a 44% increase in elasticity with the combined treatment protocol.

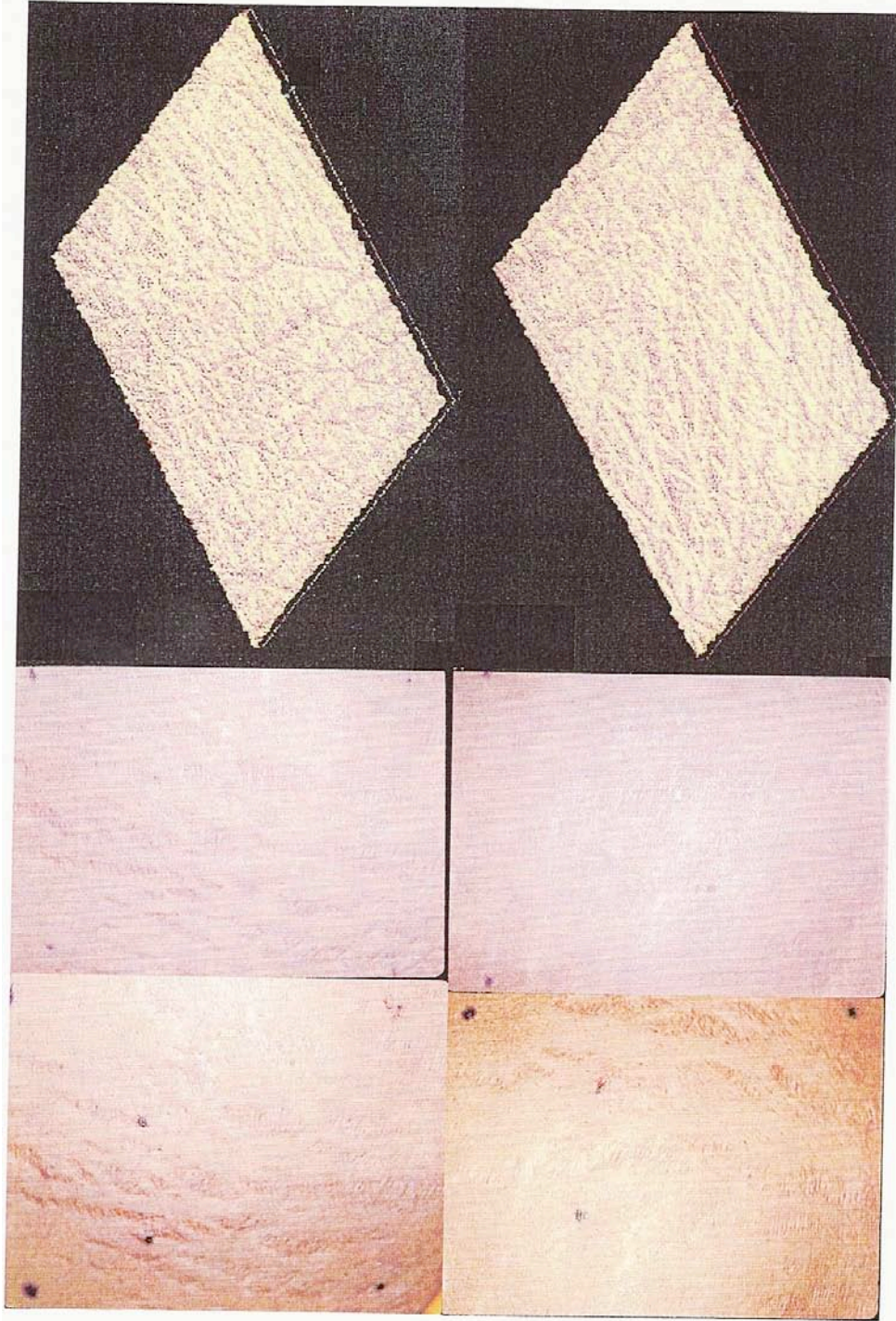
Slight transient irritation from the topical agent was experienced in the inguinal fold area by a few subjects; however, no significant adverse effects were observed. Treatment by the device alone produced no adverse effects.

device for improving the appearance of stretch marks. When combined with topical application of the new cosmeceutical agent, greater improvement of stretchmarks was observed than with microdermabrasion alone, and a very significant increase in skin elasticity was observed which appeared to be supported by the pathology. This topical product was well tolerated and irritation was not a significant problem (unlike topical retinoids in current clinical use). No special problems were encountered with either treatment protocol in darker ethnic skin types.



Microdermabrasion and Stretch Marks

Top: Pre-treatment Top: Post-treatment w/o products Top: Pre-treatment Top: Post-treatment w/o products
 Bottom: Pre-treatment Bottom: Post-treatment w/products Middle: Pre-treatment Middle: Post-treatment w/products
 Bottom: Pre-treatment Bottom: Post-treatment w/products



Microdermabrasion and Stretch Marks

Top: Pre-treatment

Top: Post-treatment w/o products

Top: Pre-treatment

Bottom: Post-treatment w/products

Bottom: Pre-treatment

Bottom: Post-treatment w/products