

## LETTER TO THE EDITOR

# Improvement of skin firmness and reduction of striae distensae with an energy-based device using quantum molecular resonance

To the editor,

This is the first case series to describe quantum molecular resonance (QMR) treatment can be effective in treating striae distensae (SD).

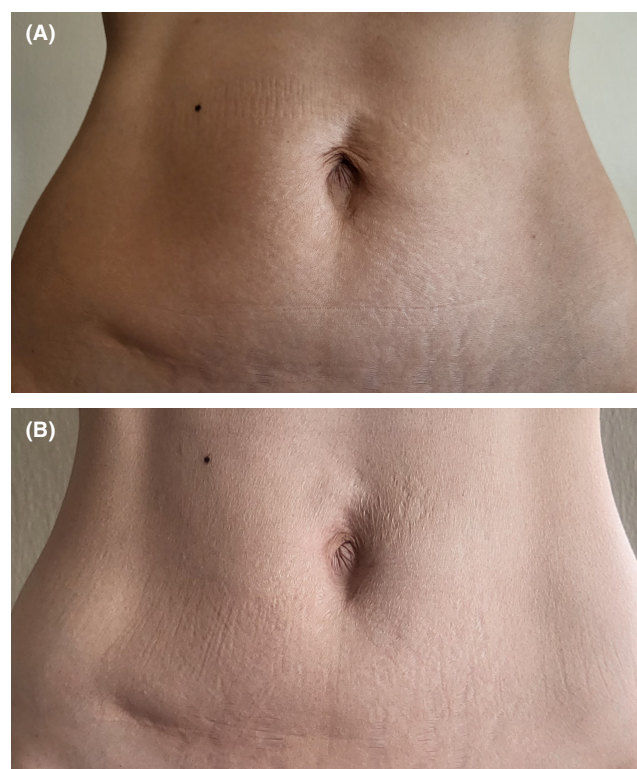
A 35-year-old woman presented with whitish streaks on the abdominal area and complained of sagging skin in the periumbilical area. The patient had a multi-gestational pregnancy 3 years ago. She recalled the lesions first began at 32 weeks of pregnancy. She had an appendectomy 20 years ago. Physical examination revealed skin laxity and whitish streaks consistent with SD (Figure 1A). Tenting skin was noted from the superior part of the umbilicus. Punch biopsies were not performed. The patient agreed to treatment with an energy-based device. All procedures were conducted after obtaining informed consent and clinical approval. The patient maintained her routines without changes and did not undergo additional treatments during the study period. The patient applied moisturizer once daily. Treatment with QMR (Corage 2.0, QuanteQ) was initiated. The vacuum handpiece with an energy level of 35 (35 W per 100s) was performed at three sessions at six-month intervals. On the third visit, there was an improvement in the firmness of the patient's skin, and the tenting skin was no longer present (Figure 1B). The patient was satisfied with the outcome with no side effects.

A 37-year-old woman presented with streaks and decreased skin firmness in the abdominal area (Figure 2A). The patient was pregnant with her first child 4 years ago and recalled the streaks initially developed during her pregnancy. The patient was healthy with no specific past history. The patient applied moisturizer once daily. The patient refused a skin biopsy. After obtaining informed consent, the patient underwent treatment with QMR (Corage 2.0, QuanteQ). The treatment protocol and the number of treatments slightly differed as Case 2 exhibited more laxity than Case 1. Five sessions at approximately five-month intervals with the vacuum handpiece at an energy level of 37 were performed. No side effects were observed, and the patient was satisfied with the outcome (Figure 2B).

SD is a common cosmetic concern and can be difficult to treat. Limited treatment options have been reported.<sup>1</sup> The tearing of the dermis occurs as a result of rapid stretching, such as during

pregnancy, weight gain, or growth spurts. When the skin tears, the underlying blood vessels become visible, resulting in the appearance of red or purple lines, indicating striae rubrae. Over time, the color fades, but the texture of the skin may become scarred, resulting in white lines.

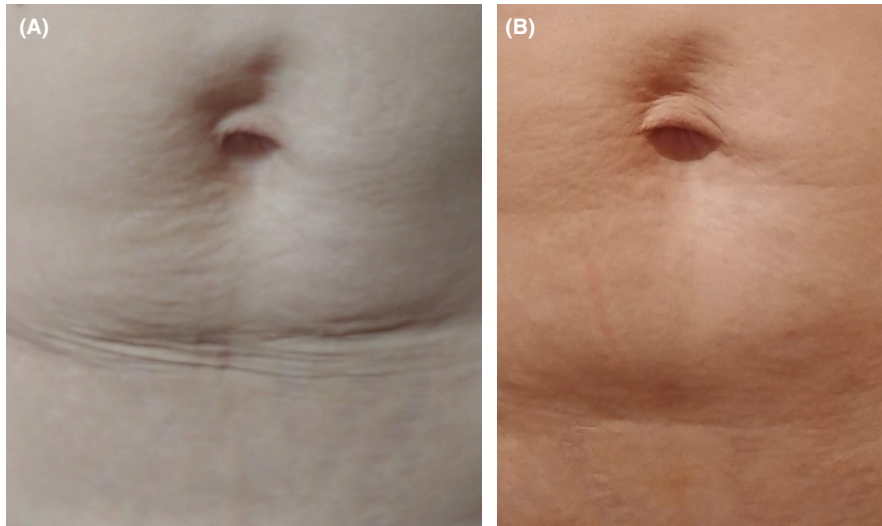
The QMR technology produces 16 multiple resonance waves with a low intensity from 4 to 64 MHz that affect molecular bonding. QMR induces cellular regeneration at a molecular level. The



**FIGURE 1** (A) Physical examination revealed skin laxity, especially around the periumbilical area, and whitish streaks consistent with striae distensae. (B) The tenting skin from the superior part of the umbilicus due to striae distensae was no longer present after treatment with QMR.

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**FIGURE 2** (A) Physical examination revealed streaks and decreased skin firmness in the abdominal area. (B) No side effects were observed, and the patient was satisfied with the outcome.

treatment has been utilized to diminish inflammation and enhance the expression of vascular endothelial growth factors (VEGF) in exposed wounds<sup>2</sup> and was used to treat postoperative edema in rhinoseptoplasty patients.<sup>3</sup> We speculate that the expression of markers to diminish inflammation and enhancement of growth factors such as VEGF impacting cellular regeneration could have influenced the production of new collagen and elastin, which helps to tighten the skin, resulting in increased firmness.

Our findings suggest QMR treatment can effectively improve skin firmness and have an effect on SD. However, we note that further research is needed to determine the efficacy and safety of this treatment in larger populations as this study has limitations including the small sample size and the lack of a control group. Objective measurements reported thus far are 2D photographs.<sup>1</sup> Histologic analysis involves assessing fibrillin and elastin content.<sup>1</sup>

Further research is required to fully comprehend how QMR compares to other treatment options for SD.

#### CONFLICT OF INTEREST STATEMENT


None declared.

#### ETHICAL APPROVAL

Authors declare human ethics approval was not needed for this study.

#### DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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