Photomedicine and Laser Surgery – Vol. 35, No. 3, 2017. Epub 2016 Dec 30 Fractional CO<sub>2</sub> laser: from skin rejuvenation to vulvo-vaginal reshaping



#### Filippini M<sup>1</sup>, Del Duca E<sup>2</sup>, Negosanti F<sup>2,3</sup>, Bonciani D<sup>4</sup>, Negosanti L<sup>5</sup>, Sannino M<sup>2</sup>, Cannarozzo G<sup>2</sup>, Nisticò SP<sup>2,6</sup>

1: Hospital State of Republic of San Marino - Republic of San Marino. 2: University of Rome Tor Vergata, Rome - Italy. 3: Dermatology Center, Bologna - Italy. 4: Piero Palagi University Hospital, Florence - Italy. 5: S.Orsola-Malpighi University Hospital, Bologna - Italy. 6: Magna Grecia University of Catanzaro - Italy.

# Abstract

#### Background

The  $CO_2$  laser has become the gold standard treatment in dermatologic surgery for the treatment of a large number of skin and mucosal lesions. The introduction of the fractional micro-ablative technology represented an integration to the ablative resurfacing technique, reducing the healing time and the side effects.

## Objective

Vaginal rejuvenation performed with this technique is a minimally invasive procedure that stimulates internal tissues of the female lower genital tract to regenerate the mucosa, improving tissue trophism and restoring the correct functionality.

## Methods

In our experience, 386 menopausal women affected with vulvo-vaginal atrophy (VVA) were treated with three section of fractional micro-ablative CO, laser.

#### Results

After three treatments, patients reported a complete improvement of the symptoms (59.94% dryness, 56.26% burn, sensation, 48.75% dyspareunia, 56.37% itch, 73.15% soreness, and 48.79% vaginal introitus pain).

# Conclusions

Fractional micro-ablative  $CO_2$  laser seems to reduce symptoms related to vaginal atrophy. The beneficial effects were reported just after the first session and confirmed 12 months after the last session.