

Q-Switched 1064-nm Nd: YAG laser versus fractional carbon dioxide laser for post acne scarring: A split-face comparative study

Hanan Hassan Sabry¹ | Mohammed Saad Hegazy² | Eman Ahmed³ |
Rehab Mohammed Salem⁴ 

¹Department of Dermatology, Venereology and Andrology, Faculty of Medicine, Benha University, Benha, Egypt

²Department of Dermatology, Venereology and Andrology, Armed Forces College of Medicine, Cairo, Egypt

³Dermatology, Kobbry El Kobbba Hospital, Cairo, Egypt

⁴Department of Dermatology and Andrology, Faculty of Medicine, Benha University, Benha, Egypt

Correspondence

Rehab Mohammed Salem, Department of Dermatology and Andrology, Faculty of Medicine, Benha University, Benha, Egypt.
Email: rehabsaleem122@yahoo.com

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Abstract

Objectives: Many treatment modalities are available for post acne scarring. However, the response to the treatment is extremely variable among patients.

Aim: The aim of this study was to compare the efficacy and safety of Q-switched Nd: YAG (1064 nm) and fractional CO₂ (10,600 nm) lasers in the treatment of atrophic post acne scars.

Methods: This study included 20 patients with atrophic facial post acne scars graded according to Sharquie's score. All subjects received four sessions of laser treatment with a 4-week interval between the sessions. The study was designed as a double-blinded, comparative, split-face study applying Q-switched 1064-nm Nd:YAG laser to the right side of the face and fractional CO₂ laser to the left side.

Results: Q-switched 1064-nm Nd: YAG laser achieved significantly higher improvement percentage when compared to fractional CO₂ lasers (33.33% versus 17.37% Sharquie's score reduction, respectively). There was a significant negative correlation between the percentages of improvement and the patients' age on both sides and a significant positive correlation with the baseline Sharquie scores on both sides.

Conclusion: Q-Switched 1064-nm Nd: YAG laser could be a promising safe option for the management of atrophic post acne scars.

KEYWORDS

acne scarring, fractional CO₂ laser, Q-switched laser

1 | INTRODUCTION

Post acne scarring occurs during the healing of any type of active lesions, ranging from papules, pustules, and comedones to nodulocystic acne. Scarring is a cosmetic problem which can disturb the psychological wellbeing and impair the patients' social lives.¹ In fact, acne scars may impair all aspects of the quality of life and have been described as a risk factor for suicide, depression, low academic performance, and unemployment. The prevalence and severity of acne

scarring in the population is not well-documented; however, it is estimated to affect 95% of acne cases.²

Multiple treatment options are available for post acne scarring including soft tissue augmentation, deep chemical peels, microneedling, surgical treatment, dermabrasion, and ablative and non-ablative laser resurfacing. Several factors should be considered while choosing the post acne scarring treatment modality. These factors include the severity of the condition and the extent of its impact on the patient's quality of life, the safety profile of