

# بسم الله الرحمن الرحيم





# شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



# جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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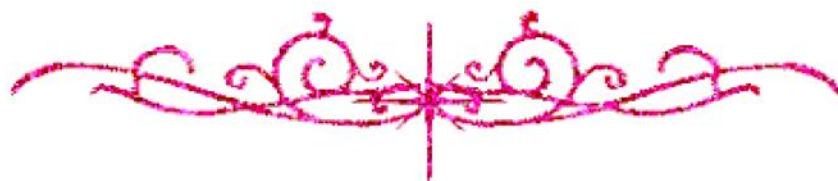


# بعض الوثائق الأصلية تالفة





بالرسالة صفحات  
لم ترد بالأصل





# **Treatment of Striae Alba using Fractional Radiofrequency with and without Lyophilized Growth Factors**

**Thesis**

*Submitted For Partial Fulfillment of Master  
Degree in Dermatology and Venereology*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

# قالوا

لَسْبَحَانَكَ لَا مَعْلَمَ لَنَا  
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ  
الْعَلِيمُ الْعَظِيمُ

صدق الله العظيم

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*Nuha Al-Rubaiay*

### **Abstract:**

**Background:** Various treatment modalities have been applied to treat striae alba with low satisfaction rate. Fractional Microneedling radiofrequency provides deep dermal coagulation, thereby inducing collagen synthesis and tissue tightening. The addition of platelet lyophilized growth factors may add to the effect of fractional Microneedling radiofrequency.

**Objectives:** To evaluate and compare the efficacy and safety of fractional Microneedling radiofrequency alone or combined with lyophilized growth factors in the treatment of striae alba.

**Methods:** In this left-right comparative study, 25 patients suffering from striae alba on the abdomen received sessions of fractional microneedling radiofrequency with lyophilized growth factors on one side and with saline (as placebo) on the other side at 4 weeks interval. Patients' satisfaction was evaluated at the end of study using a questionnaire (Patients were asked the following questions: Are you satisfied with this treatment (completely satisfied, satisfied, partially satisfied, or not satisfied)?).

**Results:** There was a significant improvement in striae alba after treatment in both the lyophilized growth factors ( $p = <0.0001$ ) and placebo sides ( $p = <0.0001$ ), the lyophilized growth factors being superior ( $p = 0.002$ ). Patient satisfaction was more on the LGF side ( $p = 0.034$ ), where 6 versus 3 patients were completely satisfied. Erythema and hyperpigmentation were less on the lyophilized growth factors side.

**Conclusion:** The combination of fractional microneedling radiofrequency and lyophilized growth factors improves striae alba outcome.

**Keywords:** Fractional - Radiofrequency - Striae - Alba - Growth – Factors.

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# *List of Abbreviations*

| Abb.                | Full term                                   |
|---------------------|---------------------------------------------|
| CMCBB .....         | Cairo medical center blood bank             |
| EM .....            | Electromagnetic                             |
| Er-YAG .....        | Erbium-substituted yttrium aluminium garnet |
| FMR.....            | Fractional Microneedling Radiofrequency     |
| H&E.....            | Hematoxylin and eosin                       |
| LGF.....            | Lyophilized growth factors                  |
| LPGF .....          | Lyophilized platelets growth factors        |
| MN .....            | Microneedling                               |
| MTZ .....           | Microthermal zones                          |
| Nd:YAG .....        | Neodymium-doped YAG                         |
| PDGF .....          | Platelet-derived growth factor              |
| PDL.....            | Pulsed-dye laser                            |
| PRP .....           | Platelet-rich plasma                        |
| RF .....            | Radiofrequency                              |
| SD .....            | Striae Distensae                            |
| SG .....            | Striae gravidarum                           |
| TGF- $\alpha$ ..... | Transforming growth factor-alpha            |
| UHF .....           | Ultra high frequency radio waves            |
| UVB .....           | Ultraviolet B                               |

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