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Study of noninvasive Radiofrequency combined with Mesotherapy for face tissue tightening





Aging Face: Frequent medical consultation

Non or less linvasive treatments

Immediate and lasting effects overtime

Walk-in/walk-out treatments

Proposal of cosmetic dermatology



Radiofrequency + Mesotherapy

Fitzpatrick R. et al., "Multicenter Study of Noninvasive Radiofrequency for periorbital tissue tightening". Lasers in Surgery and Medicine 2003: 33; 232-242.

Amin SP., Phelps RG., Goldberg DJ., "Mesotherapy for facial skin rejuvenation: a clinical, histologic, and electron microscopic evaluation". Dermatol Surg. 2006 Dec; 32(12): 1467-72.

Objective of the study

 ✓ To obtain better aesthetic results with two complementary methods

➢Bipolar RF

Dermal hydratation before RF

> Mesotherapy

Collagen pool

Rotational motion of water molecules Less potency needed Immediate contraction of collagen Obtain a uniform distribution of energy

Strong neo-collagen

Barini, Cleia, "Monopolar Radiofrequency and Bioestimulation with a cluster of aminoacids". III European Congress of Antiaging Medicine EMAA, October 2007.

Study design/Materials & Methods

- ✓ The study protocol was approved by SOARME review board (a 7-month open-label-study)
- ✓ n=47 (females)
- ✓ Age range: 36-68 years (mean age: 54.25 SD=7.8)
- ✓ Medical history



Glougau

Fitzpatrick wrinkle classification (FWCS) / Skin types Temperature and Moisture of the skin Photographs / Echographies / Biopsies Self-assessment questionnaire

*This Study was not supported by any direct or non-direct funding. It is under the author's own responsibility.

Treatment chart

Gender	Age	Glogau	Fitzpatrick v	Adipose Ti	s Laxity	Fitzpatrick	Moisture Pr N	Aoisture po	Menopause	Satisfaction	Measureme	Measureme	Measureme	Measureme	Measureme	Measureme	Echography
fem	1.89	54 III	1 1 SC	no	mild		46%	51,70%	yes	excellent	40mm	30mm	33mm	2,20mm	110mm	78mm	yes
fem		65 III	1	no	moderate	HI .	48%	52%	yes	excellent	20mm	10mm	33mm	20mm	100mm	75mm	yes
fem		69 III	H	no	moderate	1	48%	54,30%	yes	excellent	25mm	20mm	25mm	10mm	100mm	77mm	yes
fem		59 III	11	no	mild	11	38%	45%	yes	escellent	30mm	20mm	26mm	10mm	110mm	87mm	yes
fem		56 III	11	no	severe	III	51%	56%	yes	excellent	50mm	32mm	36mm	23mm	113mm	78mm	yes
fem		48 II	1	no	moderate	1	44,30%	52%	no	excellent	45mm	40mm	42mm	32mm	110mm	80mm	yes
fem		67 III		si	moderate	1	37%	46%	no	excellent	38mm	24mm	37mm	16mm	100mm	77mm	yes
fem		57 IV	111	no	severe	1	38,40%	42%	yes	very good	46mm	38mm	36mm	23mm	99mm	80mm	yes
fem		58 IV	111	no	severe	1	36%	44,20%	yes	very good	34mm	21mm	45mm	30mm	112mm	80mm	yes
fem		48 IV	111	yes	severe	1	38%	46%	yes	very good	26mm	18mm	38mm	23mm	100mm	87mm	yes
fem		48 II	1	no	mild	0	51%	55,30%	no	excellent	30mm	23mm	35mm	16mm	113mm	79mm	yes
fem		65 II	1 f	no	moderate	1	46%	54%	yes	excellent	40mm	29mm	35mm	19mm	100mm	81mm	yes
fem		41	1	no	moderate	ji .	44%	50,80%	no	excellent	34mm	23mm	30mm	19mm	112mm	87mm	yes
fem		55 II	I.	no	mild	1	39%	44,20%	yes	very good	45mm	34mm	33mm	18mm	100mm	91mm	yes
fem		36	1	no	mild	III	37,10%	38%	no	excellent	33mm	17mm	34mm	20mm	98mm	81mm	yes
fem		57 IV	1	no	severe	111	36,70%	39%	yes	excellent	31mm	14mm	41mm	25mm	120mm	83mm	yes
fem		40 II	1	yes	moderate	1.	37,70%	41%	no	excellent	30mm	12mm	42mm	29mm	100mm	75mm	yes
fem		59 IV	111	yes	severe	11	38%	42,30%	yes	very good	28mm	20mm	36mm	30mm	110mm	100mm	yes
fem		58 III	111	yes	moderate	1	39%	44,20%	yes	very good	34mm	26mm	39m	29mm	120mm	110mm	yes
fem		56 III	11	no	moderate	1	48%	50%	yes	escellent	33mm	12mm	34mm	23mm	100mm	76mm	yes
fem		54 III	11	yes	moderate	Ĵ.	37,50%	42,60%	yes	excellent	31mm	26mm	32mm	21mm	98mm	92mm	yes
fem		43	I.	no	mild	1	50,20%	54%	no	excellent	27mm	14mm	35mm	15mm	100mm	76mm	yes
fem		61 III	1	no	moderate	0	39,50%	43%	yes	very good	45mm	34mm	46mm	29mm	130mm	110mm	yes
fem		60 IV	111	yes	severe	ÚI.	38,70%	46%	yes	excellent	54mm	46mm	45mm	30mm	100mm	90mm	yes
fem		54 III	1	no	moderate	1.	39%	42%	no	excellent	42mm	36mm	38mm	33mm	100mm	80mm	yes
fem		49	1	no	moderate	III .	40%	45%	no	excellent	40mm	21mm	33mm	24mm	97mm	76mm	yes
fem		45 III	1	no	severe	0	38,70%	43%	no	excellent	45mm	28mm	35mm	30mm	120mm	78mm	yes
fem		61 IV	10	yes	severe	1	40%	45%	yes	excellent	39mm	28mm	41mm	33mm	100mm	79mm	yes
fem		44	1	no	mild	9	50%	53%	no	excellent	46mm	26mm	43mm	31mm	110mm	78mm	yes
fem		56 IV	10	yes	moderate	111	42%	46%	yes	very good	55mm	29mm	48mm	33mm	98mm	89mm	yes
fem		59 IV	10	yes	moderate	1	37,60%	44%	yes	very good	47mm	34mm	43mm	38mm	110mm	90mm	yes
fem		62 IV	111	no	moderate	8	39%	46%	yes	excellent	45mm	32mm	36mm	33mm	100mm	77mm	yes
fern		57 III	10	yes	mild	1	50%	54%	yes	excellent	51mm	29mm	39mm	32mm	110mm	80mm	yes
fem		53 III	3 MI	yes	mild	1	42%	52%	yes	excellent	39mm	12mm	31mm	26mm	120mm	78mm	yes
fem		62 IV	10	yes	moderate	1	47%	49%	yes	excellent	45mm	29mm	43mm	30mm	100mm	76mm	yes
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fem		59 IV	10	no	severe	1	36,70%	41%	yes	excellent	56mm	23mm	35mm	31mm	120mm	74mm	yes
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fem		38	1	no	mild	1	48%	52%	no	excellent	36mm	25mm	33mm	26mm	110mm	77mm	yes
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fem		56 III	10	yes	mild	01	47%	49%	yes	excellent	39mm	27m	41mm	32mm	98mm	80mm	yes
fem		37	1	no	mild	10	41%	44%	no	excellent	41mm	28mm	38mm	23mm	110mm	76mm	yes
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fem		52 II		no	mild	1	37,50%	41%	no	excellent	47mm	19m	35mm	20mm	100mm	75mm	yes

Treatment procedure

Hydratation + RF: every 21 days (mean number of sessions: 5)

Mesotherapy with collagen pool: every 7 days excluding the "RF days" (mean number of sessions: 10)



Josefina Royo, MD, "Multisource, Phase-controlled Radiofrequency for treatment of skin laxity correlation between clinical and Invivo Confocal Microscopy results and real time thermal changes". J Clin Aesthet Dermatol., 2011, January; 4(1): 28-35

Treatment procedure

Hydratation + RF

Hyaluronic acid...0.2% (2 cc) Nappage technique + Radiofrequency *

Mode	Bipolar/Resistive
Frequency	1.05 MHz
Potency	I to 65 watts

Transductor: 30 mm. (golden electrode)

Sterile emulsion coupling

Surface temperature 40-42 °C

Circular and longitudinal multiple passes

* Time : 480 seconds

Mesotherapy with collagen pool

Glycine.....1% Proline.....1% Hydroxyproline....1% Hyaluronic acid..0.2%

2cc

Nappage /Micropapules

Harth Y., Lischinsky D., "A novel method for real-time skin impedance measurement during radiofrequency skin tightening treatments". J Cosmet Dermatol. 2011 Mar; 10(1): 24-9.

Dermal Hydratation + RF

Without treatment

Results: Study Population









Results: Moisture & Temperature





Results: Measurements





Measurement 2: cheek to eye external canthus





Results: Subjective evaluation



Echographic pattern

✓ Increased thickness of dermis (45 of 47 patients)✓ Disappeared pattern of broken fibers at baseline



Patient with aging before treatment (age 68) (face)

Patient with aging after treatment (age 68) (face)

Patient without aging (age 27)

Anatomopathology

✓ Significant changes in overall appearance
✓ Increased thickness of collagen fibers (47/47)
✓ Increased thickness of elastic fibers (5/47)





Verhoeff Van Gieson (EVG)







Orcein 400x

























Conclusions

 \checkmark Significant clinical, histological and echographic changes were observed with the two complementary methods

 \checkmark Although there were different types of skin aging at baseline, the applied treatments tightened the dermal tissue proportionately

 \checkmark According to all the patients, the treatment was very satisfactory

 \checkmark Follow-up at 18 months (96% of patients) shows maintenance of the aesthetic results achieved



2009

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Merci beaucoup!



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