

Effect of fractional microablative CO2 laser on sexual function in women with genitourinary syndrom



2025

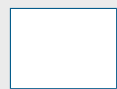


Affiliations to disclose:

obstetric and gynecologist surgeon



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Sponsored by: **Ashkan Medical Idea**



ashkan

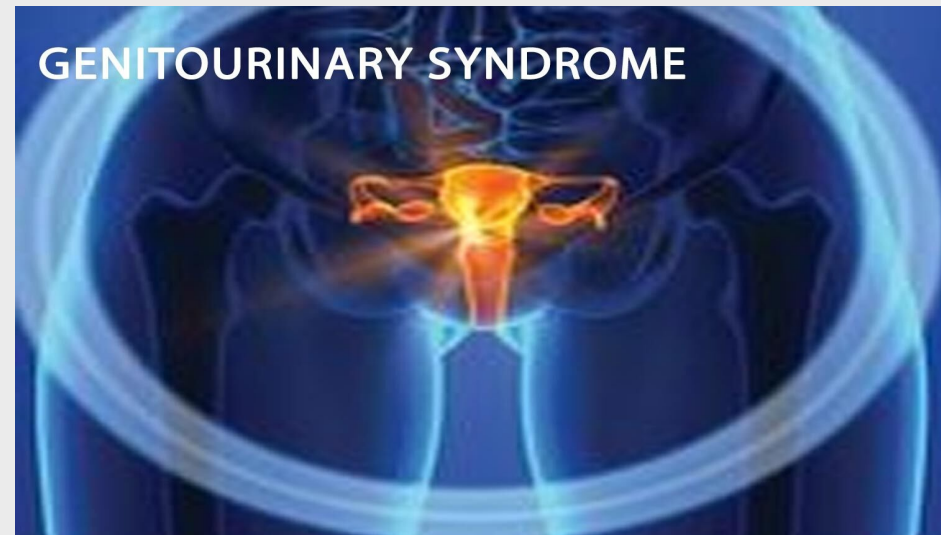
Ashkan Medical Idea

ایده پزشکی اشکان

semi-experimental study



- ❑ 160 women undergoing vaginal laser therapy with fractional carbon dioxide laser [Angela]
- ❑ Ayatollah Taleghani Hospital in Tehran during the years 2019 to 2022,
- ❑ selected with convenience sampling method



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The inclusion criteria

- ☐ age ≥ 18 years,
- ☐ access to clinical records
- ☐ syndrome symptoms
- ☐ consent to participate in the study



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exclusion criteria

- 1-Defects in essential information required by this study**
- 2-use of drugs and vaginal estrogen compounds**
- 3-lack of sexual intercourse in the last 6 months**



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demographic information
information related to the
disease

(symptoms and
symptoms)

using history and clinical
examination

- ☐ **age**
- ☐ **menstrual status**
- ☐ **number of laser treatments**
- ☐ **the presence or absence of vaginal atrophy.**

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- **Laser therapy** was performed in the form of a maximum of **3 sessions** (**the day of referral/ 4 weeks later/ and 2 months after the first referral**) for the patients with the fractional carbon dioxide laser device available in Ayatollah Taleghani Hospitals in Tehran.
- The device used for laser therapy for all people is of a single brand Angela for **Ashkan Medical Idea** and the time of doing it was considered the same for all people.



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The Female Sexual Function Questionnaire (FSFI)

- ❑ was **completed before laser treatment and again 3 months after the last session.**
- ❑ It should be mentioned that when completing the questionnaires, the researcher gave **full oral explanations to the people** until the possible ambiguities were completely resolved



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Table 1: The general state of sexual function and its components

Variables		Before laser therapy		After laser therapy		P-value
		Mean/ n	SD/ %	mean	SD	
Sexual function	Normal	24	15.0	64	40.0	< 0.001 [*]
	Abnormal	136	85.0	96	60.0	
Questionnaire components	Sexual desire	1.27	0.17	5.24	0.46	< 0.001 ^{**}
	Stimulation	0.38	0.13	3.04	1.01	< 0.001 ^{**}
	Moistening	5.58	0.48	15.85	0.75	< 0.001 ^{**}
	Orgasm	5.01	0.66	13.13	0.50	< 0.001 ^{**}
	Satisfaction	5.57	0.48	15.87	0.75	< 0.001 ^{**}
	Dyspareunia	5.00	0.66	13.13	0.50	< 0.001 ^{**}

Notes: SD, standard deviation; ^{*}Chi-Square test; ^{**}Mann-Whitney test; ^{**}Paired T-test

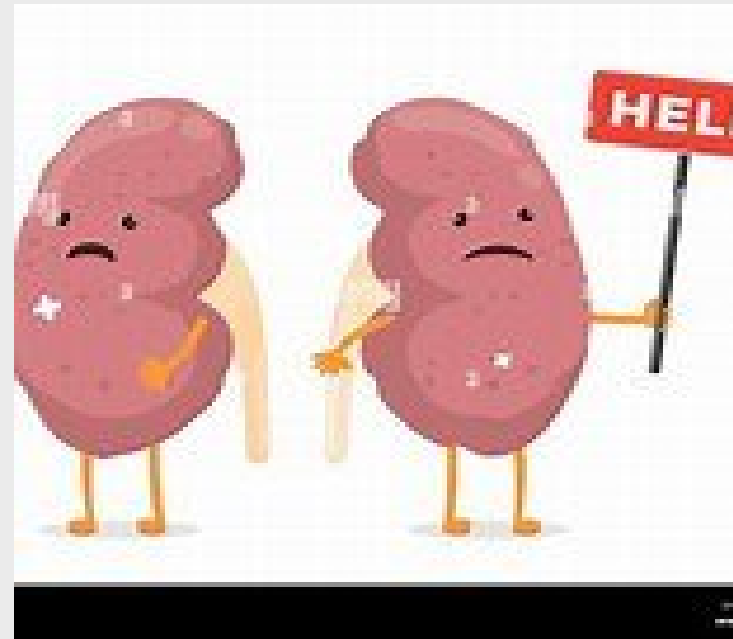
Table 2: Sexual performance status based on contextual variables

Variables		N (%)	Before laser therapy		After laser therapy		P-value*
			Mean/ n	SD/ %	mean	SD	
Age (year)	30 - 59	116 (72.5)	20.45	7.68	27.07	6.90	< 0.001*
	≥ 60	44 (27.5)	13.00	4.52	20.64	4.28	
Menstruation state	Menopause	116 (72.5)	14.52	4.95	28.64	2.45	< 0.001*
	Non-menopausal	44 (27.5)	22.00	5.01	34.00	1.49	
VVA	Yes	96 (60.0)	12.88	3.47	20.42	3.73	< 0.001*
	No	64 (40.0)	26.69	3.91	32.63	2.91	
Number of laser therapy sessions	One	48 (30.0)	19.50	7.58	26.58	6.28	0.002**
	Two	72 (45.0)	19.50	7.74	26.33	7.28	
	Three	40 (25.0)	15.10	6.98	27.90	5.86	

Notes: VVA, vulvovaginal atrophy; SD, standard deviation; *Kruskal-Wallis H test; **Spearman's rank correlation coefficient

Discussion

The results of this study showed that the **patients' scores** from the **sexual function questionnaire** were **significantly higher after laser therapy**



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Discussion

> Eur J Obstet Gynecol Reprod Biol. 2022 Oct;277:84-89. doi: 10.1016/j.ejogrb.2022.08.012. Epub 2022 Aug 24.

Fractional Co2 laser for vulvo-vaginal atrophy in gynecologic cancer patients: A valid therapeutic choice? A systematic review

Ottavia D'Oria ¹, Andrea Giannini ², Giovanni Buzzaccarini ³, Andrea Tinelli ⁴, Giacomo Corrado ⁵, Antonio Frega ⁶, Enrico Vizza ⁷, Donatella Caserta ⁶

Affiliations + expand

PMID: 36037664 DOI: 10.1016/j.ejogrb.2022.08.012

> J Clin Med. 2022 Sep 2;11(17):5201. doi: 10.3390/jcm11175201.

Fractional Carbon Dioxide Laser Improves Vaginal Laxity via Remodeling of Vaginal Tissues in Asian Women

Lin Gao ¹, Wei Wen ², Yuanli Wang ¹, Zhaoyang Li ¹, Erle Dang ¹, Lei Yu ³, Chenxi Zhou ¹, Meiheng Lu ¹, Gang Wang ¹

Affiliations + expand

PMID: 36079130 PMCID: PMC9457362 DOI: 10.3390/jcm11175201

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improved all six components of sexual performance (sexual desire, stimulation, moistening, satisfaction and pain)

➤ [Climacteric](#). 2022 Jun;25(3):228-234. doi: 10.1080/13697137.2021.1990258. Epub 2021 Oct 25.

Use of a vaginal CO₂ laser for the management of genitourinary syndrome of menopause in gynecological cancer survivors: a systematic review

[J Mejia-Gomez](#)¹, [J Bouteaud](#)¹, [E Philippopoulos](#)¹, [W Wolfman](#)¹, [C Brezden-Masley](#)²

Affiliations + expand

PMID: 34694948 DOI: [10.1080/13697137.2021.1990258](#)

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no special complications were observed regarding the use of laser therapy in the examined patients

these findings **were consistent** with the results of the **present study**.

Review > Sex Med Rev. 2017 Oct;5(4):486-494. doi: 10.1016/j.sxmr.2017.07.003.

Epub 2017 Aug 23.

Sexual Function in Women Suffering From Genitourinary Syndrome of Menopause Treated With Fractionated CO₂ Laser

Stefano Salvatore ¹, Eleni Pitsouni ², Fabio Del Deo ³, Marta Parma ³, Stavros Athanasiou ², Massimo Candiani ³

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PMID: 28843942 DOI: 10.1016/j.sxmr.2017.07.003

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effect of fractional
CO2 laser **Angela**
in the treatment of
vulva-vaginal
atrophy in cancer
patients and
showed that there
are **very few side**
effects in this
method

> Eur J Obstet Gynecol Reprod Biol. 2022 Oct;277:84-89. doi: 10.1016/j.ejogrb.2022.08.012.
Epub 2022 Aug 24.

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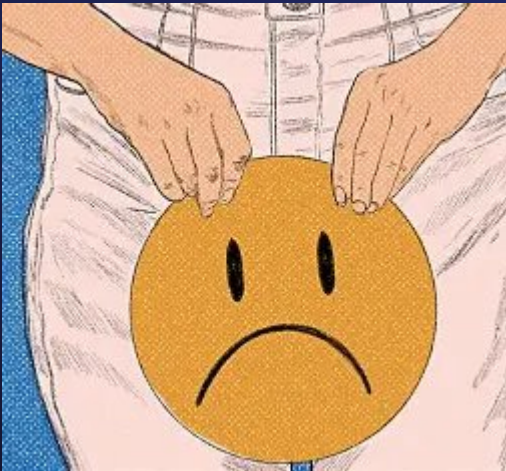
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limitation



- ❑ **One of these cases was the inappropriate cooperation of a number of research units that were inevitably excluded from the study due to the lack of proper cooperation in participating in the meetings on time or not meeting the exclusion criteria;**
- ❑ **there are certainly many known and unknown factors that may have influenced the results of this study.**

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