

## CO2 LASER TREATMENT FOR FEMALE STRESS INCONTINENCE

### Hypothesis / aims of study

The initial approach for treatment of SUI should be conservative (PFMT, bio-feedback, electro stimulation , etc) . The objectives of conservative treatment of SUI have focused on the recovery of function of pelvic floor muscle. The aim of this study is to determine the effectiveness of CO2 laser as an conservative treatment of patients complaining of SUI.

### Study design, materials and methods

This is a preliminary study including 66 patients with SUI . Inclusion criteria were female with mild to moderate SUI(Sandvic severity index),mild to moderate POP( 1-2 Baden Waker halfway system ),normal Pap smear ,negative urine culture. vaginal canal ,introits and vestibule free of injuries or bleeding , Demographic data is shown in table1. Bladder symptoms before and after treatment are shown in table 2

Patients underwent between 2 to 4 sessions of treatment by fractional CO2 Laser Vaginal (Femilift®, Alma Lasres®) lasing 81 microdots per 1 square cm along the vagina 360 degrees 3-5 passages. Length of the procedures was 10-15 minutes.The parameters used in each single pass were pulse=60-100 mJ/dot,The second session was performed in all cases one month after the first session. Follow-up was made after one month of each session and eight weeks after stopping treatment. All patients signed an informed consent before inclusion in the study, as established by the Declaration of Helsinki.Statistical analysis of data was performed

table 1

variabeles	
number of patients	66
age (mean,range)	48.1(36-76)
menopause	24(36%)
hrt use	4(17%)
number of treatments	
2	13(19.7%)
3	52(78.8%)
4	1(1.5%)
incontinence	
stress	57(82.3%)
mixed	9(13.7%)

### Results

The mean ages was 48.1 years (range 36-76). Pre and post urinary symptoms are shown in table 2. Pre and post vaginal symptoms are shown in table3.

87.9% of the patients reported subjective improvement is sui symptoms and there was 80% reduction of pad use.\_there were no complications.

table2

	עמודה 4	עמודה 3	עמודה 2	עמודה 1
Pre and post treatment urinary symptoms				
	pre	Post		P
Urgency	12 (18.2%)	8 (12.1%)		
Frequency	9 (16.3%)	4 (6.1%)		0.05
Nocturia	4(6.1%)	0( 0%)		
Pad use	46 (69.7%)	13 (19.7%)		<0.05
Improvement in urinary incontinence		VAS >8(1-10) 47 (71.2%)		
		VAS >7(1-10) 58 (87.9%)		<0.05
General impression comparing pre and post treatment		VAS >8(1-10) 50 (75.8%)		
		VAS >7(1-10) 55 (83.3%)		<0.05

table3

	עמודה 4	עמודה 3	עמודה 2	עמודה 1
Pre and Post treatment vaginal symptoms				
	Pre	Post		P
VaginsI burning	2 (3%)	2(3%)		
Vaginal itching	2( 3%)	2 (3%)		
Vaginal dryness	12 (18.2%)	1 (1.5%)		< 0.05
Dyspreunia	12 (18.2%)	2 (3%)		<0.05
Dusuria	2 (3%)	2 (3%)		
Sexual activity	60 (91%)	60 (91%)		

#### Interpretation of results

CO2 laser treatment can be a useful tool for the treatment of SUI . Our findings make us optimistic about the use of CO2 laser as treatment either alone or as an adjuvant of other conservative modalities for the treatment of SUI.

#### Concluding message

In this preliminary study, we observed that treatment with CO2 laser is highly effective for the treatment of SUI. In addition, we found a significant improvement in all those patients who reported vaginal laxity. fractional co2 laser treatment for female SUI is a safe procedure with no side effects that can be done as a short office procedure .87.9% of the patients reported subjective improvement is sui symptoms and there was 80% reduction of pad use. patients who also had symptoms of vaginal dryness and dyspareunia also had a significant improvement .limitations of the study: retrospective analysis,no. A Multi center prospective study is now being done after FDA approval with objective and QOL measures to further investigate efficacy and safety of laser treatment for sui.

#### Disclosures

**Funding:** none **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** Sheba Medical Center **Helsinki:** Yes **Informed Consent:** Yes