Transcutaneous Temperature Controlled Radiofrequency for Overactive Bladder

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INTRODUCTION

Overactive bladder with and without incontinence is rising with the aging population. Most treatments involve lifestyle change, medications, neuromodulations, and more recently paralytic agents. Anticholinergic medications often have undesirable side effects. Other treatments have procedural and surgical risks. Transvaginal radio frequency treatments for vaginal tightening and atrophy have recently been introduced that have shown shrinkage of the vaginal mucosa with increased vaginal moisture. Radio frequency effects on bladder and urethral tissue at 40-45 Celsius has been shown to be safe and well tolerated.

AIM

To evaluate the safety, tolerability, and clinical efficacy of transcutaneous temperature controlled radiofrequency (TTCRF) on anterior vaginal tissue for overactive bladder.

METHOD

- 75 women, ages 21-85, with overactive bladder included in the study
- Each patient received 3 sessions at intervals of about 1 month.
- Treatment was performed using a slim S-shaped probe with a stamp-sized metal radiofrequency emitter on one surface of the tip (10 minutes total time on average).
- Full length treatment of the anterior vagina with concentration on the pubocervical fascia was performed.
- Tissue temperature during therapy was elevated to and maintained between 40 degrees C and 45 degrees C.
- No anesthesia was required.
- After treatment patients immediately resumed normal routines, including exercise and sexual activities.

RESULTS

- 68/75 (90.6%) patients overactive bladder without incontinence reported a reduction of OAB symptoms by at least one third, 33%.
- 43/75 (57%) patients with overactive bladder without incontinence reported a 50%+ reduction in OAB symptoms.
- Of these patients 24/75 (32%) completely resolved their OAB symptoms.
- Seven patient with s (9%) had more moderate symptoms reduction of 25% and less. All seven of these patients had overactive bladder with incontinence.
- All patients noticed some reduction in OAB symptoms over baseline.
- Results for nocturia were similar.

A Slim finger sized S-Shaped wand with a stamp sized metal radiorequency emitter on the back side can be used on the external vulvar structures and deep inside the vagina all the way to the apex. The entire anterior compartment is treated with emphasis on the pubocervical fascia to 40-45 degrees Celsius for approximately ten minutes to shrink tissues, increase collagen production, and increase local blood flow.

Radiofrequency emitting tip.

CONCLUSIONS

TTCRF is an effective non-pharmacologic, non-surgical option for women with overactive bladder symptoms. Treatment have a visible tightening effects on vaginal mucosa and also appears to increase local blood flow, resulting in increased vaginal tightness and moisture. Improvement of symptoms in overactive bladder without incontinence is more dramatic than with overactive bladder with incontinence.

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