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Journal homepage: www.ijogr.org**Short Communication****Emsella: A breakthrough, non invasive technology for treatment of incontinence**Juhi Deshpande¹, Chanchal Kumar Singh^{2,*}¹Dept. of Obstetrics and Gynecology, Maa Vindhyavasini Autonomous State Medical College, Mirzapur, Uttar Pradesh, India²Dept. of Orthopedics, Institute of Medical Sciences - Banaras Hindu University, Varanasi, Uttar Pradesh, India**ARTICLE INFO***Article history:*

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ABSTRACT

Emsella is a revolutionary, US FDA approved, noninvasive treatment technology used for treatment of urinary incontinence in both men and women. It uses High-Intensity Focused Electromagnetic (HIFEM) technology as well as biofeedback mechanism for this purpose. Emsella delivers around 11,000 Kegel's contractions in half hour and strengthens the muscles so that patients can hold the bladder and urethra together tighter, providing control and strength.

Other uses involve sexual rejuvenation, treatment of erectile dysfunction, prolapse, coccydynia.

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1. What is the Emsella Chair?

Emsella chair is a state-of-the-art, non-invasive, painless, and US FDA-approved device used for treatment of pelvic floor muscle weaknesses, urinary incontinence, and laxity of vaginal muscles. The Emsella chair helps not only in strengthening and rehabilitating the pelvic floor muscles but also contributes in re-establishing neuromuscular control for treating urinary incontinence. This device can be used in both males and females.¹

2. Indication of use of Emsella Chair

1. Stress Incontinence: It is the most common form of incontinence among women and is usually associated with menopause, ageing, and/or childbirth. These conditions reduce the strength of the muscles and their ability to hold urination. Emsella chair can help these women with stress incontinence without the risk of infection and complications associated with a surgery as it is non-invasive.^{1,2}

2. Sexual Rejuvenation: As Emsella helps to regenerate and rejuvenates the pelvic floor muscles and vaginal canal, thus in turn it helps to treat sexual dysfunction caused by loss of muscle tone.
3. Urge Incontinence: Urge incontinence occurs when one has a sudden urge to urinate and can't hold the urine. Emsella chair can rehabilitate the pelvic floor by contracting and relaxing the muscles of the pelvic floor, thus helping in treatment of urge incontinence.³
4. Erectile Dysfunction: Emsella treatment regulates training of the muscles of the pelvic floor to improve sexual function in males and in turn helps in treatment of Erectile dysfunction.
5. Pelvic organ prolapse⁴
6. Vault prolapse
7. Coccydynia

3. Contraindications

1. Pregnancy
2. Implanted neurostimulators or defibrillators
3. Cardiac pacemakers
4. Hemorrhagic conditions

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5. Anticoagulation therapy
6. Drug pumps
7. Metal implants- hip/knee implants (relative contraindication depending on type implant used)
8. Malignant tumours
9. Copper – T
10. Heart disorders
11. Fever

4. How it Works?

Emsella treatment is a painless, non-surgical, and non-invasive procedure in which patient just needs to sit on the Emsella chair for duration of 28 minutes. During this duration, patients may experience contraction and relaxation of muscles throughout the session without any pain.⁴

Emsella Chair delivers the equivalent of approximately 11,200 Kegel exercises in just one session. The Emsella Chair treatment causes production of new muscle fibre and proteins, thus enhancing the neuromuscular coordination among the pelvic floor muscles.

5. Technology used in Emsella Chair

Emsella Chair uses High-Intensity Focused Electromagnetic (HIFEM) technology for triggering the pelvic floor muscles. One of the biggest advantages of the Emsella Chair is that its electromagnetic currents are extremely beneficial for triggering muscular contractions that exert the muscles just as Kegels. Moreover, the Emsella Chair lets one to derive the same benefits as Kegels, at a greater speed, intensity, and without conscious effort.⁵

The HIFEM therapy would be given by electromagnetic stimulation of the pelvic floor by chair device. The electromagnetic field passes in a noninvasive manner through the neuromuscular tissue where induced electric currents depolarize neuronal cells and initiate action potentials.

The HIFEM technology generates electromagnetic currents that create a magnetic field and in turn stimulates contractions to provide an intense exercise of the muscles. With each session, patients can experience tighter and stronger muscles.

In this device a coil generates pulsed electromagnetic fields that penetrate deep into the pelvic floor muscles when a person sits on the chair inducing stimulation of the pelvic muscles and contracting them rhythmically in order to strengthen them. The device generates a focused electromagnetic field with intensities of up to 2.5 T and penetration up till depth of 10 cm. The electromagnetic energy produced is directed vertically upward from the center of the seat. The chair design ensures that the patient's perineum is centred when he/she is sitting upright on the chair.^{4,5}

6. Treatment Protocol

Six sittings are recommended at a frequency of 2–3 sessions per week.

Each sitting is 28 minutes treatment session, during which the patient sits in the center of HIFEM chair.

To ensure adequate pelvic floor muscle stimulation, the operator confirms the patient's chair posture throughout the session and adjusts the intensity of stimulus as high as tolerated by patient.⁴

7. Tips and Precautions

1. Patient should dress comfortably (preferably light fabric bottoms without zippers) on the treatment days.
2. Patients should take off jewellery.
3. Patients should not wear jeans or thick clothing.
4. One should take out credit cards and coins from the pockets.
5. Patient should take out iPads, watches, or phones as electromagnetic energy may harm the devices.

8. Advantages of Emsella Chair

1. Bladder and pelvic muscle control is restored
2. It is painless, non-invasive, and safe 28-minute treatment procedure
3. No recovery or healing time involved
4. One may remain fully clothed during the treatment
5. Significant improvements after a single session
6. FDA approved

9. Conclusion

Emsella chair is a completely non-invasive and safe procedure. A single session lasts for about 28 minutes and the most of the patients experience improvements after six sessions.

During the treatment, patients stay fully clothed. Usually, there is no pain associated with the Emsella treatment and there is no requirement of anesthetics. Patients can resume normal activities on a daily basis immediately after the Emsella treatment.

10. Take Home Message

Emsella chair is a wonderful device that can be used for both men and women of any age. It is very helpful in treating urinary incontinence, improving the quality of sexual life, and recovery after childbirth. Patients experience dramatic improvements after a single session. The results will generally continue to enhance over the period of time.

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