

# Interferential Therapy Versus Pelvic Floor Exercise for the Management of Stress Urinary Incontinence in Women

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## Abstract

**Background:** There are many treatments given for stress urinary incontinence in women which includes life style modification, drugs with alpha adrenergic action. However, studies involving interferential therapy and pelvic floor exercise for management of stress urinary incontinence in women are limited to this date.

**Objectives:** To compare the effects of interferential therapy and pelvic floor exercise in subjects with stress urinary incontinence.

**Study design:** Quasi experimental study design, Pre and Post type.

**Procedure:** 20 subjects in the Group A received interferential therapy and 20 subjects in Group B received pelvic floor exercise. The Outcome measure of this study is Pad test.

**Results:** The post-test mean value of interferential therapy is for Group A was 5.450 and the Post-test value of pelvic floor exercise for Group B was 5.100.

**Conclusion:** Pelvic floor exercise therapy significantly improves the pelvic floor muscle function in subjects with urinary incontinence in women.

**Keywords:** Interferential therapy; Pelvic floor; Muscle exercise

incontinence are associated with depression and sexual dysfunction in ways other than the obvious [1].

Urinary Incontinence (UI), also called urinary voiding dysfunction, is the involuntary loss of urine. Urinary incontinence is not a disease, but a symptom that can be caused by various abnormalities that directly or indirectly affect bladder control [2].

It can be caused by serious distention and weakening of pelvic floor muscles and connective tissue and also by damage to their innervations. It occurs when internal sphincter does not close completely. Internal sphincter is the muscle that surrounds urethra [3]. The aging process causes a general weakening of sphincter muscles, causes a decrease in bladder capacity [4].

Stress incontinence in women occurs as result of:

- Having had many children through vaginal deliveries in such cases pregnancy and child birth strain muscles of pelvic floor.
- Hysterectomy-complications may damage pelvic floor muscles sphincter or nerves that enable sphincter muscle to contract thinning of urethra after menopause. Estrogen deficiencies can cause urethra to thin out so that it may not close completely.

The pelvic floor muscles are a Group of muscles that wrap around the underside of the bladder and rectum. The common reason for the pelvic floor muscles to become weakened was childbirth [5].

Pelvic floor stimulation is a unique and low risk stimulation therapy which enhances the body's natural mechanism and incontinence mechanism by activating appropriate pudental nerve reflexes. Pelvic floor stimulation is non-surgical and drug free produces a potential care and is of relatively low cost of patients. As physicians identify and treat the vast number of patients who suffer from incontinence, pelvic floor stimulation became a valuable tool in the armamentarium of treatment in incontinence [6].

Interferential current therapy exploits the principle of interference to maximize the current permeating the tissues

## Introduction

According to International Continence Society "Involuntary loss of urine when intravesical pressure exceeds maximum urethral closure pressure in absence of detrusor activity. It occurs with minor activities such as coughing, sneezing, running, laughing, standing". In fact, certain aspects of urinary

whilst reducing to a minimum unwanted stimulation of cutaneous nerves. Urinary incontinence is treated at 5-10 Hz for 15 minutes, the lower rate of stimulation representing an attempt to excite small afferent fibers in the pudendal nerve that have a slow conduction velocity [7]. This will produce reflex inhibition of detrusor following contraction of the slow twitch pelvic floor muscles.

Pelvic floor muscle exercises after childbirth may prevent stress incontinence developing later in life. Pelvic floor muscle training exercise is recommended as the first choice of treatment for women with the types of Urinary incontinence after remediable conditions have been excluded [8].

An efficient treatment for urinary incontinence requires studying women as a whole, taking in consideration not only the pathology, but also the social and emotional aspects involved [9]. Surgical treatment is usually one of the first-choice treatments that come to mind, however, interest in a more conservative solution has increased. The International Continence Society recommends that the conservative treatment be considered as the first option of intervention in incontinent women [10].

Classic urodynamic methods such as stress test and video-urodynamics (VCS) may provide objective verification of urinary incontinence, but in themselves do not allow for any quantification of urinary loss. Perineal pad weighting test has been proposed as a practical method of quantitating the urine loss in both clinical and research setting [11-18]. The test have been shown to be easy to perform and reproducible (Figure1).

## Methodology

This was a quasi-experimental study done to analyze **Interferential Therapy Versus Pelvic Floor Exercise for the Management of Stress Urinary Incontinence in Women**, study type was comparative study, sampling method convenient sample size of 40 subjects and study duration 4 weeks and study setting Department of Obstetrics and Gynecology SRM Medical College and Research Centre, Chennai.

### Inclusion criteria of the study are as follows

- Women diagnosed with stress urinary incontinence Age 30-50 years.
- Post natal women.

### Exclusion criteria of the study are as follows

- Pelvic fractures Patients those who undergone previous gynecological or neurological operations for correction of stress incontinence.
- Tumors.
- Urge incontinence.
- Psychological impairment.
- Any gynecological infections Menstruation.
- Diabetes Mellitus.

## Materials used in the study

- Interferential therapy unit.
- Rubber electrodes.
- Lint pouch Water bowl.
- Surgical Spirit, Sanitizers, Cotton, Rubber Gloves, Sanitary Napkin and Spring Balance.

## Outcome measures of the study

### Pad test:



Figure 1 Outcome measures of the study: Pad test.

## Procedure

This study includes totally 40 female subjects suffering from stress urinary incontinence around age Group of 30 to 50 years is selected according to inclusion and exclusion criteria. The procedure will be explained to subjects and written informed consent form will be taken.

Diagnosis of stress urinary incontinence was done first to measure their quantification of urine leakage using pad test before starting the treatment. Then the subjects were separated in to 2 Groups-Group-A (interferential therapy) and Group-B (pelvic floor exercise), 20 subjects in each Group.

### Group-A interferential therapy

Group A includes 20 subjects.

- **Patient position:** The treatment was given in supine position with knees placed apart.
- **Position of electrodes:** Four electrodes covered with lint cloth pouch was used, two placed in lower abdomen (below the level of anterior superior iliac spine (ASIS) on both the sides) and the other two is placed on the medial aspects of both the thighs.
- **Procedure:** The treatment was given 3 sessions per week for 4 weeks. During each session of treatment the lint cloth pouch was changed regularly for each patient.

- **Frequency:** 0-10 Hz.
- **Intensity:** Intensity based on subject's tolerance level.
- **Duration:** 15 minutes.

### Group-B pelvic floor exercises

Group B includes 20 subjects.

Exercise was taught to the subjects and they are advised to continue the exercise for 4 weeks.

- Do the exercise every day for four weeks.
- Hold urine for 10 seconds and relax.
- Hold motion for 10 seconds and relax.
- Contract vagina for 10 seconds and relax.
- Contracting vagina doesn't contract other areas like back, thigh, and buttocks.
- Don't hold breathing while doing the exercise.

Once the 4 weeks of treatment session got ended the patients was again taken to measure the quantification of incontinence using pad test [19-26]. The test is started without the patient voiding. A pre weighed absorbent perianal pad is put on and the timings begin. The patient is asked not to void until the end of the test.

The patient's drinks 500 ml of sodium free liquid within 15 minutes then sits or rest the end of the half an hour. In the following half an hour the patient walks around, climbs up and down one flight of stairs and performs the following exercises.

- Standing up from sitting (10 times).
- Coughing vigorously (10 times).
- Running on the spot (1 min).
- Bending down and pick up small object (5 times).

- Washing hands under cold running water for 1 min.

Approval from the Institutional Ethical Committee was obtained before starting the study. The Study design was experimental study and the study type was comparative type, Sampling method was convenient sampling with the sample size of 24 subjects and study duration of 6 weeks, Study setting was on SRM Medical College Hospital & Research Centre, Kattankulathur [27-32]. Inclusion criteria were both men and women with Pain in the shoulder for at least 3 months, age between 40 to 70 years of Primary adhesive capsulitis.

Exclusion criteria were subjects with history of shoulder surgery or manipulation under anesthesia, Neurologic deficits affecting shoulder functioning during daily activities, Pain or disorders of the cervical spine, elbow, wrist, or hand and other pathological conditions involving the shoulder rotator cuff tear [32-36].

At the end of the hour the pad is removed and weighed using spring balance, any difference from the starting pad weight constitutes fluid loss and is recorded.

If the pad becomes saturated during the test then a second pad may be used. In assessment an increase of 1g is allowed as normal to compensate for possible sweating and vaginal discharge.

### Data Analysis

The obtained data was analyzed by using the SPSS software (VERSION 17). Paired 't'-test was used to test whether there is a significant difference in Group A and Group B (**Table 1**).

Independent 't'-test was used to test the results between Group A and B (**Tables 1A-3; Graphs 1-3**).

**Table 1** Comparison of pre and post values of pad test before and after exercise in Group-a subject treated with interferential therapy for 4 weeks.

Paired Sample Statistics						
	Group A	Mean	N	SD	Paired t Test	P Value
Pair 1	Pad Pre Before	4.0	20	0.0	NA	NA
	Pad post Before	4.0	20	0.0		
Pair 2	Pad pre After	6.6	20	0.0	6.9	0.001
	Pad Post After	5.4	20	0.0		

**Table 1A** Correlations of pre and post value of pad test after exercise.

Paired samples Correlation				
	Group A	N	Correlation (r)	Sig Level
Pair 2	Pad pre After and Pad post After	20	0.332	0.152

NS-Not statistical significance Correlation between Pad Pre After and Pad Post After in Group A at 95% (P>0.05).

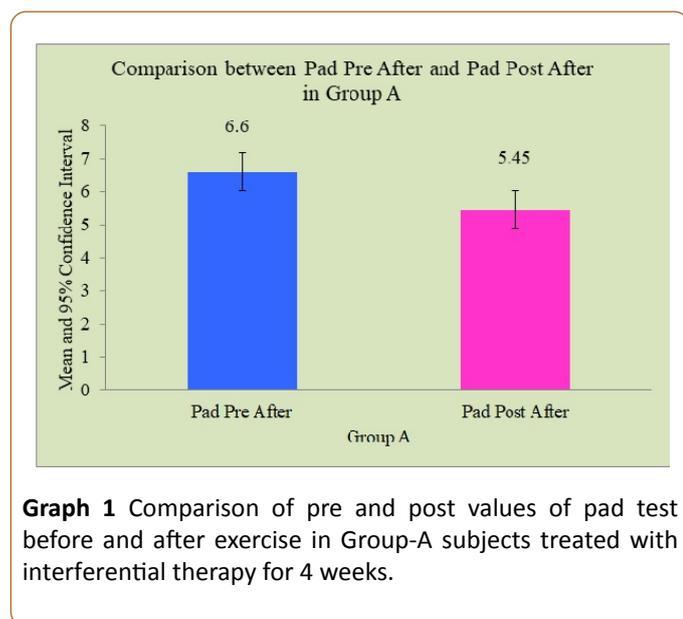
**Table 2** Comparison of pre and post values of pad test before and after exercise in Group b subjects treated with pelvic floor exercise for 4 weeks.

Paired Sample Statistics						
Group B		Mean	N	SD	Paired t Test	P Value
Pair 1	Pad Pre Before	4.0	20	0.0	NA	NA
	Pad Post Before	4.0	20	0.0		
Pair 2	Pad pre After	6.9	20	0.718	19.615	0.001***
	Pad Post After	5.1	20	0.718		

**Table 3** Comparison of pre and post values of pad test of both Group A and Group B.

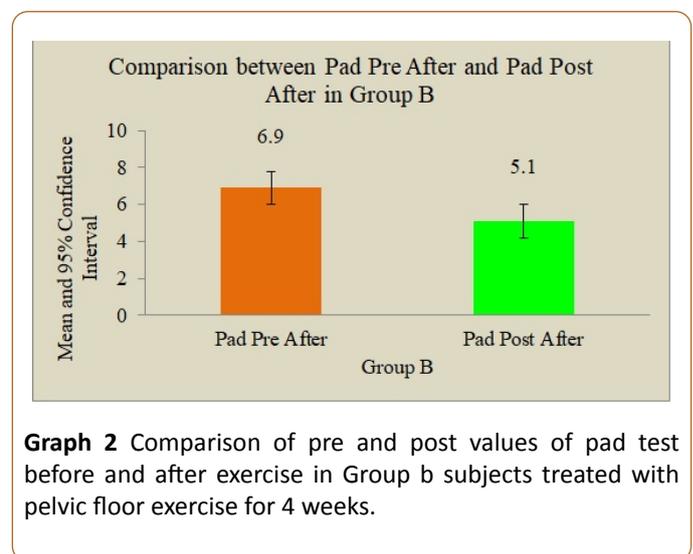
	Groups	N	Mean	SD	Unpaired t Test	P Value
Pad pre Before	Group A	20	4.0	0.0	NA	NA
	Group B	20	4.0	0.0		
Pad Pre After	Group A	20	6.6	0.681	1.356	0.183 NS
	Group B	20	6.9	0.718		
Pad Post Before	Group A	20	4.0	0.0	NA	NA
	Group B	20	4.0	0.0		
Pad Post After	Group A	20	5.4	0.605	1.667	0.104 NS
	Group B	20	5.1	0.718		

NA-Not Applicable \*\*\*- There is statistical significance difference between Pad Pre After and Pad Post After in Group A at 95% (P<0.05).

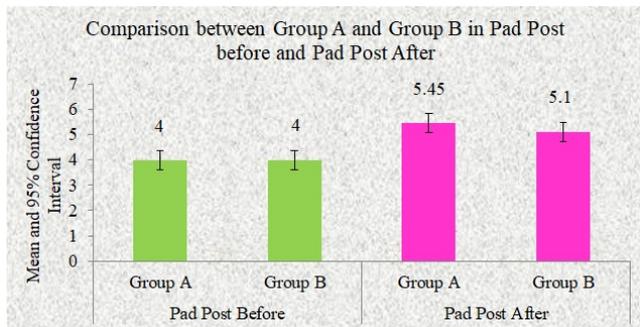


**Graph 1** Comparison of pre and post values of pad test before and after exercise in Group-A subjects treated with interferential therapy for 4 weeks.

There is statistical significance difference between pre pad test before exercise and post pad test after exercise in Group B Patients treated with Pelvic floor exercises at 95% (P<0.05).



**Graph 2** Comparison of pre and post values of pad test before and after exercise in Group b subjects treated with pelvic floor exercise for 4 weeks.



**Graph 3** Comparison of pre and post values of pad test of both Group-A and Group-B.

## Results

Results were analyzed using paired t-test by using SPSS version 17.

According to **Table 1** the study shows values of Group A that the pad pre before is 4.00 and pad pre after is 6.60 and pad post before is 4.00 and pad post after is 5.450. The statistics show that there is statistically significant difference in pad pre before and pad pre after and pad post before and pad post after when treated with interferential therapy.

According to **Table 1A** shows the correlation between pad pre after and pad post after and the value is 0.322 and significant value is 0.152 which is not significant.

According to **Table 2** the study shows the values of Group-B that the pad pre before is 4.00 and pad pre after is 6.90, pad post before is 4.00 and pad post after is 5.100. The statistics show that there is significant difference in pad pre before and pad pre after and pad post before and pad post after when treated with pelvic floor exercises.

According to **Table 3** the values of pad pre before and pad pre after, pad post before and pad post after of both Group A and Group B are compared and the results shown are not significant when treated with interferential therapy for Group A and pelvic floor exercises for Group B.

## Discussion

This study was focused to compare the conservative management for stress urinary incontinence in post natal women.

The risk factors for the development of urinary incontinence in women include: Childbirth, mode of delivery, pregnancy, increased parity, hysterectomy, recurrent urinary tract infections, gastrointestinal factors, medications such as diuretics, sedatives and beta-blockers, smoking, alcohol and caffeine use, presence of two or more chronic diseases such as chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), diabetes, advanced age, white race, and high body mass index. Other causes of incontinence in both men and women include: Diseases that damage the cortical

and subcortical inhibitory centers such as dementia, Alzheimer's disease, normal pressure hydrocephalus, and multi-infarct disease.

The continence mechanism of lower urinary tract relies on a complex interaction of anatomy, tissue integrity and nerve reflexes. The purpose of the urethra is to provide a conduit from the bladder to the outside. Essential anatomic elements to continence include proper mucosal apposition, constant urethral tone and maintenance of the bladder neck/proximal urethra in the retro pubic position.

A poorly functioning urethra can also contribute to or be the primary cause of stress urinary incontinence. Patients with stress urinary incontinence were previously described as having intrinsic sphincteric deficiency (ISD) or type-III incontinence.

An atrophic urethral mucosa, a scarred or fibrotic sub-mucosal layer, poor venous plexus and/or impaired smooth muscle function can prevent normal apposition of the urethral mucosa. This loss of the normal tissue elastic properties from multiple surgeries, aging, estrogen deficiency or radiation can impair normal coaptation and pressure transmission in the urethra, resulting in urine loss with minimal exertion. Importantly, patients may have some degree of a poor functioning urethra working in concert with deranged anatomy or nerve injury, with all factors contributing to stress urinary incontinence.

In the present study, the post pad test values of Group A and Group B has been compared. The results of Group A (interferential therapy) shows that the pre pad test values is 6.60 and post pad test values is 5.450. The statistics shows that there is significant difference t value (0.001) in pre pad test and post pad test when treated with interferential therapy (Group-A) in **Table 1**. Doug et al. reported 36% cure rate with interferential therapy alone. Pudendal nerve is the key nerve for the electrical stimulation therapy to improve the stress urinary incontinence due to 1) its extensive innervation of the pelvic floor 2) major role in volitional and pelvic and bladder muscle activity and 3) its proximal to the vagina and rectum. Investigators generally agree that effective pelvic floor stimulation uses pudendal nerve reflexes to stimulate a strong contraction of pelvic floor muscles.

Stimulation frequency appears to be the most critical factor for influencing continence mechanism via pudendal nerve reflexes. Stimulation at a relatively high frequency (50 Hz) can cause pelvic floor muscle contraction through a pudendal nerve reflex loop. Stimulation at a low frequency (10 Hz) can activate pudendal nerve to pelvic floor reflex that depresses or eliminates uninhibited bladder contractions.

Pelvic floor muscle stimulation for the stress incontinence contracts the same as muscles getting contracted during pelvic floor exercises.

### The advantages of pelvic floor muscle stimulation are:

- The correct muscles are always contracted.
- Voluntary compliance to exercise.

It has been seen that stimulation of pudendal nerve will trigger long latency spinal cord reflex response. In addition to direct motor response, this reflex stimulus causes a widespread contraction of pelvic floor muscles. These contractions can strengthen the pelvic floor muscles, elevating the bladder neck and increasing outflow resistance to urine leakage.

Pelvic floor muscle stimulations a unique, low risk therapy which enhances the body's natural continence mechanism by activating appropriate pudendal nerve reflexes. It is also non-surgical drug free, provides a potential cure, and is of relatively low cost to patients.

In the other hand several reports confirmed the effect of pelvic floor exercises (PFE) on female urinary incontinence. Pelvic floor muscle exercise therapy for stress incontinence focused on the integration of the automatic and subconscious use of the pelvic floor muscles during the daily posture and movement patterns, and on integration of pelvic floor muscles exercise in daily life.

The therapy included teaching about the anatomy and function of the bladder, the pelvic floor muscles, the continence mechanism, toilet behavior, and education on the importance of adherence to the advice.

The Pelvic floor muscle exercise therapy is a simple method and it is frequently used. The International Continence Society recommends that conservative treatment be the first option of intervention in incontinent women. Several studies prove the effectiveness of Pelvic floor muscle exercise in urinary symptoms of incontinent women.

The pelvic floor muscles are a Group of muscles that wrap around the underside of the bladder and rectum. Stress incontinence is when urine leaks when there is a sudden extra pressure ('stress') on the bladder. Urine tends to leak most when you cough, laugh, or when you exercise (like jump or run). Strengthening the pelvic floor muscles can often cure stress incontinence. After child birth. The common reason for the pelvic floor muscles to become weakened is childbirth. If you do pelvic floor muscle exercises after childbirth, it may prevent stress incontinence developing later in life.

The study shows the values of Group B (pelvic floor muscle exercise) that the Pre pad test is 6.90 and post pad test is 5.100. The statistics show that there is significant difference t value (0.001) in pre pad test and post pad test when treated with pelvic floor exercises in **Table 2**.

Many factors may contribute to the success of pelvic-floor musculature exercises. When Pelvic floor muscle weakness is due to peripheral nerve damage, regaining Pelvic floor muscle strength through active exercise will improve support to the pelvic floor directly. Contractions of pelvic-floor muscles also tighten the fascial attachments to the urethra, which in turn increases urethral pressure. These fascial attachments, which normally fix the urethra in place, may provide inadequate pelvic-floor support.

Kegel described a pelvic muscle exercise program exercise program in 1948 that has formed the basis for many

techniques of exercising the appropriate muscles. Pelvic floor muscle training is best taught by therapist who can instruct the patient on which to exercise.

Pelvic floor physiotherapy plays an important role in management of cases of stress incontinence. Pelvic floor exercise alone is a safe, simple treatment.

The values of pre pad test and post pad test of both Group A (interferential therapy) and Group B (pelvic floor exercise) are compared, the Graph 3 represents the difference of Group A (interferential therapy) and Group B (pelvic floor exercise) in post-test which shows Group B (pelvic floor exercise) have shown reduction in weight of the pad than Group A (interferential therapy).

The values of pre pad test and post pad test of both Group A (interferential therapy) and Group B (pelvic floor exercise) are compared, the Graph 3 represents the difference of Group A (interferential therapy) and Group B (pelvic floor exercise) in post-test which shows Group B (pelvic floor exercise) have shown more reduction in weight of the pad than Group A (interferential therapy). For stress incontinence most patients see significant improvement in six to eight weeks. Electrotherapy and pelvic floor stimulation, but the study has been done in short duration within 4 weeks so the Group B (pelvic floor exercise) has been found effective comparing Group-A (interferential therapy).

## Conclusion

The study shows pelvic floor exercises shows more improvement when comparing interferential therapy in subjects with Stress Urinary Incontinence. So this study recommends the use of Pelvic Floor exercise over Stress Urinary Incontinence.

## References

1. Kegel ALT (1964) Kegel exercises to assist women during delivery by increasing the strength of muscles, improves muscle flexibility and muscle control. *British J Obstetric Gynaecol* 95: 77-89.
2. Yamanishi T, Mizuno T, Yoshida K, Sakakibara R, Uchiyama T, et al. (1982) The efficacies of interferential therapy for the treatment of urinary incontinence and storage dysfunction refractory to the conventional conservative treatments. *Am J Obstetric Gynecol* 174: 76-84.
3. Henry MM (1984) Prevalance of fecal and urinary incontinence developing after vaginal delivery and their effect on pelvic floor muscles. *Iran J Nurs Midwifery Res.* 20: 347-353.
4. Olson (1987) Electrotherapy and pelvic floor stimulation. *Am J Obstetric Gynecol* 7: 19-24.
5. Henalla SM, Kirwan P, Castleden CM, Hutchins CJ, Breeson AJ (1988) significant improvement of pelvic floor exercises alone with patients having incontinence. *British J Obstetric Gynaecol* 95: 602406.
6. Dwyer PL, Lee ECT, Hay DM (1988) Obesity and urinary incontinence in women. *British J Obstetric Gynaecol* 95: 91-96.

7. Deborah CH, Tchou, Adams C, Edward R, Varner et al. (1988) Pelvic-Floor Musculature Exercises in Treatment of Anatomical Urinary Stress Incontinence. *Phys Ther* 68: 652-655.
8. Henalla SM, Kirwan P, Castleden CM, Hutchins CJ, Breeson AJ (1988) The effect of pelvic floor exercises in the treatment of genuine urinary stress incontinence in women at two hospitals. *Br J Obstet Gynaecol* 95: 602-606.
9. Karl SO, ChB Mb, Bridges N (1990) The conservative management of patients with symptoms of stress urinary incontinence: A randomized prospective study comparing weighted vaginal cones and interferential therapy. *Am J Obstet Gynecol* 162: 87-92.
10. Goats GC (1990) Interferential current therapy. *Br J Sports Med* 24: 87-92.
11. Wadsworth H, Chanmugam APP (1990) 4th edn 337-338.
12. Walters MD, Dombroski RA, prihoda TJ (1990) Perineal pad testing in quantification of female stress urinary incontinence. *Int Urogyneco J* 1: 3-6.
13. Lose G, Versi E (1992) Pad weightening test in diagnosis and quantification of incontinence. *Int Urogyneco J* 1: 324-328.
14. Kegel AH (1995) The effect of kegel's exercises in improving function and rehabilitation of pelvic floor muscles. *Iran J Nurs Midwifery Res* 20: 347-353.
15. Hendrik HTM, Birghmans B (1996) Effect of pelvic floor exercise in the management of female genuine incontinence. *Am J Obstet Gynecol* 174: 120-125.
16. Yvette P, deKrief D, Erwin EH, Wegen V (1996) The effect of exercise therapy method using myofeedback for stress urinary incontinence then exercise therapy alone. *Am J Obstet Gynecol* 174: 126-130.
17. Stephane K, laycock J, Naylor D (1996) The efficacy of pelvic floor exercise and biofeedback for treatment of genuine stress incontinence. *BMC Womens Health* 6: 11.
18. Talseth K, Holme (1999) The training pelvic floor muscles superior to electrical stimulation, vaginal cones and management of genuine stress incontinence. *J Urology* 170: 490-493.
19. Eason E (2000) Prevalance of urinary incontinence among women who delivered vaginally and had third and fourth degree perineal tears. *BMC Pregnancy Childbirth* 13: 59.
20. Smith JH (2001) Effect of kegel exercise programs for pelvic floor dysfunction. *BMC Pregnancy Childbirth* 13: 60-75.
21. Dry A (2002) Kegels exercise during vaginal delivery to improve the urethral and renal sphinter function. *Rev Urol* 6: S29-S47.
22. BuketAksaca (2003) Pelvic floor exercises for the treatment of stress urinary incontinence in womens. *Eu Nrourol Urodyn* 22: 654-658.
23. Lo SK, Naidu J, Yuelong C (2003) Additive effect of interferential therapy over pelvic floor exercise alone in the treatment of female urinary stress incontinence and urge incontinence: a randomized control trail. *Hong Kong Physiother J* 21: 37-42.
24. Wijanse D, Metsemakers MJ, Ilse PE, Borne BV (2003) Effectiveness of pelvic floor muscle exercise therapy supplemented with a health education program to promote adherence among women with incontinence. *Eu Nrourol Urodyn* 22: 79-86.
25. Parkkinen A (2004) Efficacy of kegels exercises for pelvic floor dysfunction. *BMC Women's Health* 6: 11.
26. Gersh MR (2004) Electrotherapy in rehabilitation first Indian edn. chapter- 10,pp: 332-334.
27. Fitz Patrick Lf (2008) Prevalance of urinary and fecal incontinence occur during child birth(vaginal delivery). *Int Urogyneco J Pelvic Floor Dysfunct* 19: 5-33.
28. Herbruck Lf (2008) Effect of vaginal delivery on pelvic floor muscles which leads to urinary incontinence and pelvic floor desent. *Urol Nurs* 28: 173-184.
29. Oka H (2008) Efficacy of interferential low frequency therapy for elderly wet overactive bladder patients. *Indian J Urol* 24: 178-181.
30. Suzanne Hagen (2009) Pelvic floor muscle training delivered by a physiotherapist to a symptomatic women in aout patient setting. *Urol Nurs* 28: 107-115.
31. Braekken HI (2010) pelvic floor muscle function and pelvic organ prolapsed. *J Pelvic Floor Dysfunct* 19: 15-23.
32. Braekken H, Majida M, Engh Me, Bo K (2010) can pelvic floor muscle training reverse pelvic organ prolapsed and reduce prolapsed symptoms? An assessor blinded randomized controlled trail. *Am J Obstet Gynecol* 203: 170.
33. Imamura M, Abrams P, Bain C, Buckley B, Cardozo L, et al. (2010) Systematic review and economic modelling of the effectiveness and cost-effectiveness of non-surgical treatments for women with stress urinary incontinence. *Health Technol Assess* 14: 1-188.
34. Magovich M (2013) Biofeedback for Pelvic Floor Muscle Re-education. *Physiother* 7: 47-56.
35. Henriques JR, Fitz F, Alves AT, Silveira FI, Teixeira F, et al. (2014) The effect of pelvic floor muscle training in urinary incontinent elderly women: a sistematic review. *Am J Obstet Gynecol* 203: 115.
36. U Care Medical Policy (2015) Pelvic floor stimulation for the treatment of urinary incontinence (Clinical and Quality Management, Policy no:2015M0028A, pp: 1-10.