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EFFECT OF KEGAL EXERCISES ON THE MANAGEMENT OF FEMALE URINARY INCONTINENCE

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Abstract

Stress urinary incontinence (SUI).:- Defined as the complaints of involuntary leakage of urine on effort, excretion, sneezing or coughing by the international continence society(1) is the most common type of urinary incontinence in women. The prevalence of stress urinary incontinence, which affects up to 40% of community. Dwelling women living in the western world. Its prevalence is increasing due to aging society(2) .But only a quarter of all women with this problem seek medical support(3,4). Surgical treatment is the more effective treatment for SUI, conservative treatment is now recommended as first line treatment in elderly women or those with mild symptoms (5).

Keywords: *Kegel Excersice, Management, Urinary Incontinence*

INTRODUCTION

Stress urinary incontinence (SUI).:- Defined as the complaints of involuntary leakage of urine on effort, excretion, sneezing or coughing by the international continence society(1) is the most common type of urinary incontinence in women. The prevalence of stress urinary incontinence, which affects up to 40% of community. Dwelling women living in the western world. Its prevalence is increasing due to aging society(2) .But only a quarter of all women with this problem seek medical support(3,4). Surgical treatment is the more effective treatment for SUI, conservative treatment is now recommended as first line treatment in elderly women or those with mild symptoms (5).

The prevalence of urinary incontinence in young females (18-25 year) was 37.15% which is strongly agree with Neimr and Middleton who was reported 52% and 51% reported by Wolin studied among college students. The total cases of urinary incontinence in developing countries that is 29,500 women's is UK, Spain, France & German. The prevalence of urinary incontinence in India that is 58%.

Conservative treatment, a non-surgical therapy, includes improving the lifestyle, bladder training, pelvic floor muscles exercises. Muscles stimulation & by biofeedback of pelvic muscles (6). They were first described in 1948 by the American Gynecologist anold kegel . The patient needs to be trained in how to contract their pelvic floor muscles.

Several studies how reported systemic review on pelvic floor muscles exercises but have covered the female urinary incontinence with stress urge, & mixed urinary incontinence or have dealt with all non-surgical treatment including drugs(7,8,9). The pelvic floor muscles which consist of the: Levator ani and coccyges muscles (10). The levator ani muscles levator ani muscles compresses three

portions: puborectalis muscles, pubococcygenus and illiococcgyenus muscles. During the first contractions, the patient tightens and relaxes the pelvic muscles quickly. During the slow contraction, the patients hold the contracted muscles for a longer period and then relax. The first contraction trains the pelvic floor muscles to adapt increased intra-abdominal pressure (IAP) during coughing and laughing. The flow contractions help with muscles strengthening.

When you first the kegel exercise, tense the muscles in your pelvic floor 18-12 contraction for a count of three, then relax them for a count of 3. You can do ten repetitions over the next several days. Practice until you hold their muscles tense for a count of 10. Your goal should be to do three sets of ten repletion of every day.

BENEFITS OF KEGEL EXERCISES

1. The pelvic floor muscles support the wound, the bladder & bowels.
2. Kegal exercises help to prevent your urine liking, but can also help prevent the accidental passing of stool or gas and may even help to improve orgasms.

KEGAL EXERCISE STEPS

There are four best positions of Kegel exercises are given by following.

1. Lying on your back
2. Side line
3. Lying Prone on your stomach
4. Seating up-right on an exercise boll or a chair

A study conducted by Ali shah, Kashanian and Azari , (2011) on effect of kegel exercises on urinary incontinence among 50 women age between 25 to 54 years who were suffering urinary incontinence. The study result represented that the average score life quality of urinary incontinence suffering women was 53.15 before doing kegel exercises and after the treatment was 73.82 that there was a significant difference between them (p=0.0001)

As per research own experimental that in my society and during clinical practice observed that so many females has urinary incontinence and kegel exercise is effective to cure the Urinary incontinence so, research felt strong need to research on this topic.

PROBLEM STATEMENT

A experimental study on effect of Kegel exercise on mgt of UI among females residing in selected areas of(Dist), Karnal, Haryana

METHODS

This study was conducted of according to the Cochrane handbook for systemic review of interventions 11 and the statement by preferred reporting items for systemic review and meta-analysis group14.

1. Eligibility criteria for review:-

1. Participated: Women with SUI.
2. Inventions: - Keygel exercises taught by health care professionals and developed repeatedly as defined as the program of contraction of voluntary muscles.
3. Comparators: - No-Treatment or regular care case such as advice & instructions on the use of the continence guard.

4. Outcomes: - Patient self-reported Improvement, urinary incontinence symptoms from recommended questionnaires, pad test and pelvic floor muscle pressure.
5. Types of Studies:- Only randomized controlled being is included.

2. **Data Sources and Study Selection:-**

The randomized control trails on female urinary incontinence patients undergoing kegel exercises as the main intervention that report one or more major or secondary results were selected . Excluded were studies combining of kegel exercises with biofeedback or electrical stimulation therapy.

The first round was based on the title and abstract of each reference and was based on the second more intense analysis.

3. **Data-Extraction and Analysis**:-

Relevant data, such as the subject inclusion or exclusion criteria, baseline demographic and clinical characteristics of the study participants, treatment protocols, and the outcome variables of each study, were consolidated using a standardized form . The magnitude of the effect of kegel exercise was calculated using the pooled relative risk for outcome data and the mean difference and standardized mean difference for continues outcome data. With 95% confidence intervals using the mantel-haenszel test. I-squard (I) Test was used to defect the heterogeneity, and the chi-squared (X) test was used to recognized and statistical heterogencity. When heterogencity was present ($p < 0.1$), the data were analyzed using the random effect model. when heterogencity was absent z ranges from 0% to 100% a fixed effect model was applied when the values between 0% & 40% cab be Interpreted as unimport heterogeneity, when the ranges up to 60% i.e moderate heterogeneity & the ranges over 60% that is considerable heterogeneity (11).

RESULTS

Total candidates562 were obtained through electronic reference searches, the 436 remain after excluding 126 overlapping ones, according to the inclusion an exclusion criterion by the tittle, stay on 41 pages and the last 5out of these11, the last 510 subjects were selected.

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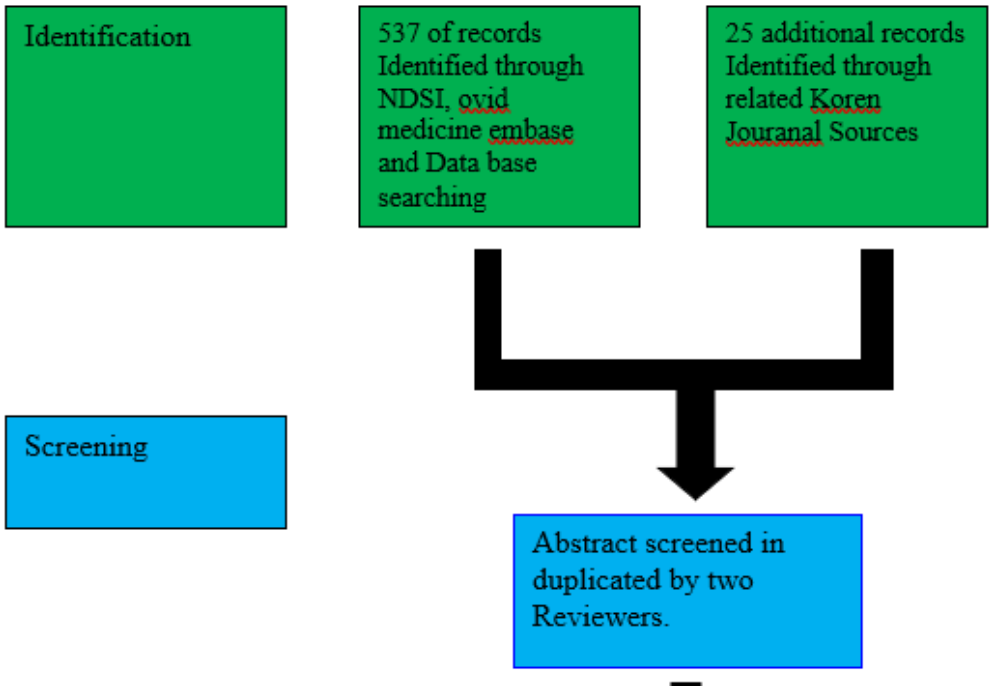

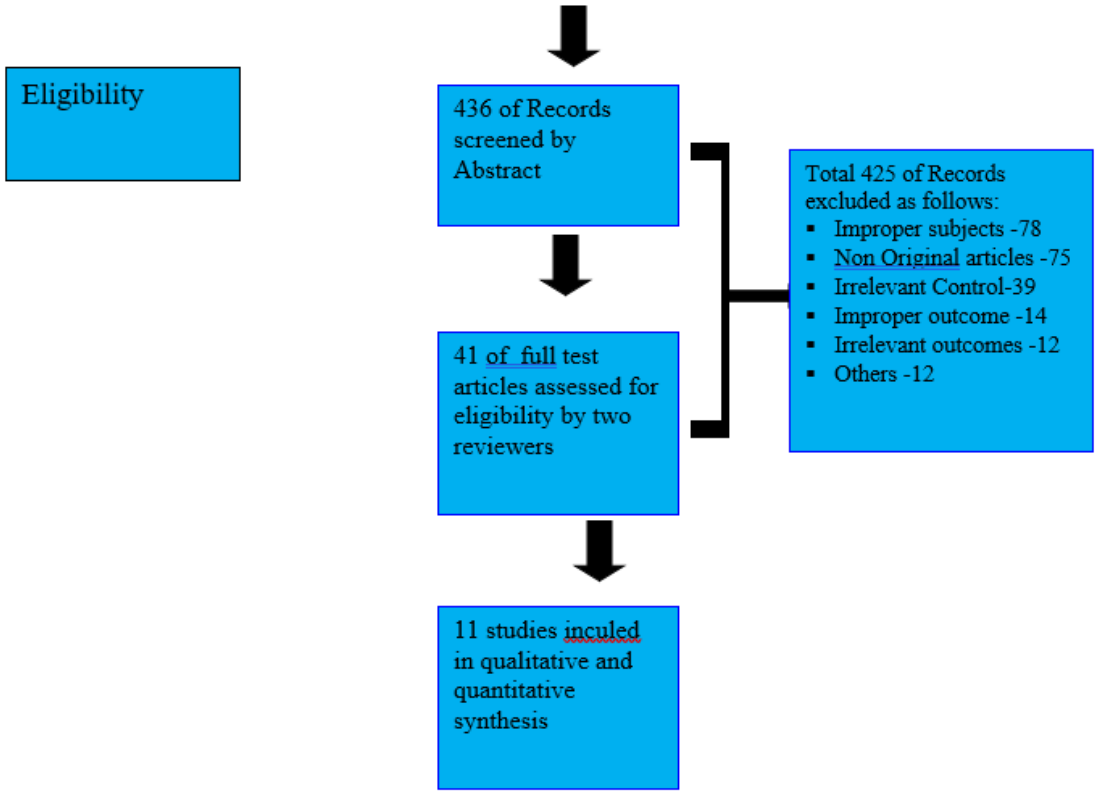

From 1989 to 2014 by 11 selected references have been I irregularly studied on kegel exercises. The general age of the subjects was 40 to 50 years in seven papers and 60 years over in four papers. The kegel exercises were mainly taught by professional therapist and varied by the no. of contractions. Five to Six and the numbers of times a day 24 to 100. The others variations involved elevation of the intensity of the contraction.

EFFECT OF KEGEL EXERCISES

1. **Subjective Assessment of Improvement in SUI:-**
   The various difference scales were used to measure patient response to treatment in the selected studies, The data was included in the formal comparisons as long as the trails state the number of women perceived that they have been cured. Subjective assessment of improvement in SUI were measured in four studies (12-15) each kegel exercise group should more perceived symptoms of urinary incontinence than their respective control group.

Study of Subgroup	Experimental Events	Total	Control Events	Total	Weight	Risk Ratio M.H.Fix 95% cl
Burns et.al **(1993)**	7	43	1	39	35.3 %	6.35 (.82, 49.32)
Be et.al **(1999)**	23	25	1	30	30.6 %	27.60 (4.0,190.24)
Henalla et. Al **(1989)**	17	26	0	25	17.2%	33.70 (2.14, 532.01)
Lagro-janssen et.al **(1991)**	28	33	0	33	16.9%	57.00 (3.62, 896.38)
Total **(95% cl)**		127		127	100.0 %	26.09 (8.50, 80.11)
Total Events	75		2			

Heterogeneity- x2= 217, df=3 (p=0.540)12 =0.0
Test for overall effect Z= 5-70

Improvement in Stress Urinary Incontinence

2. **Questionnaire:-**
   Urinary incontinence symptoms were measured by a questionnaire in three studies(16,17,18) . Symptoms were significantly lower in kegel exercise grow than in the control group.

3. **Pad-Test:-**
   Three studies measured mean urine loss volumes(17,18,19). Kegel exercise group mean deviation of 3.27g less urine loss than controls statistically. Studies using standardized bladder volumes (13,20) reported significantly lower in kegel exercise group than the control group .but heterogeneity had high i.e. (I2= 91.0%, P= 0.001).

4. **Pelvic floor Muscles pressure:-**
   Pelvic floor muscle pressure has been measured in 5 studies(14,16,17,18,21) by using perineometer. Pelvic floor muscle pressure was improved after kegel exercises with a standardized mean difference of 1.06.

DISCUSSION

The characteristics and methods of Kegel exercises of a total of 510 subjects over 11 RCT studies. Some studies of urinary incontinence have analyzed the effects of applying biofeedback or electrical muscles stimulation with Kegel exercises. Kegel exercises basically to present urinary in post partum women and they are one of the safest behavioral therapies without any side effects and their complications. The treatment of urinary incontinence symptoms by reinforcing weekend of pelvic floor muscles. It was differences between the pages in term of the method of contraction and relation of pelvic floor muscles, Frequency of exercises, duration of exercises;
Repetitions and position. One should not contraction of legs, hip, and abdominal muscles when doing Kegel exercises- properly. The self-report of urinary in continence symptoms after kegel exercise was locked in 24hrs urinary activity diaries.

THE PAD TEST

The pad test has been as a source of objective outcome data for recent urinary incontinence diagnose because there is adequate evidence (22, 23) that it can be reflect changes after urinary incontinence treatment. The contractility of pelvic floor muscles was measured using a perineometer. The pelvic floor muscles are contracted 3times & average value is used

CONCLUSION

The kegel exercise methods has not yet been scandalized, their results consistently show the reinforcement of pelvic muscle and kegel exercise are a safe method of intervention . The references used in study mostly deal with short term interventions of three months, and improvement in the prevention and management of urinary incontinence in premenopausal middle used women using kegel exercises needed longer term studies.

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