

Efficacy of Kegel exercises on lower back pain control in patients of Cystocele

Taqdees Naqish, Farwa Rizvi, Shaista Ambreen

Departments of Gynecology/Obstetrics and Physiotherapy, Shifa college of Medicine, and Community Medicine, Islamabad Medical and Dental College (IMDC), Bahria university, Islamabad, Pakistan.

Objective: To determine efficacy of Kegel exercises on control of lower back pain in patients of Cystocele.

Methodology: This randomized control trial was conducted in the Department of Rehabilitation, Shifa International Hospital, Islamabad, Pakistan from May, 2012 to November, 2012. A total of 50 patients of cystocele were selected by consecutive sampling were included in two groups (25 each) by randomization. Kegel's and postural correction exercises were introduced to the experimental group and back strengthening and postural correction exercises to the control group. Data analysis was carried out by using SPSS v16.

Results: 60% subjects responded well to Kegel's

and postural correction exercises and 40% to the back strengthening and postural exercises. Kegel's exercises were found effective for management of lower back pain in patients with Grade I and II Cystocele ($p=0.001$). 32 subjects (64%) were in Grade I, and 18 subjects (36%) were in Grade II of cystocele. 27 (54%) subjects had no pelvic heaviness after performing Kegel's exercises, 17 (34%) had slight pelvic heaviness, while only 6 (12%) had moderate pelvic heaviness.

Conclusion: Kegel's exercises were found significantly effective for management of back pain in patients with Grade I and II Cystocele. (Rawal Med J 2013;38:275-278).

Key Words: Exercise, cystocele, low back pain.

INTRODUCTION

Cystocele is a prolapse of the anterior vaginal wall with herniation of the bladder. This can result from the central or lateral weakness of a pubocervical fascia between the bladder and the vagina.¹ A staging system is used to grade the severity of a cystocele. A stage I or II prolapse descends to progressively lower areas of the vagina. A stage III prolapse descends to or protrudes through the vaginal opening. Surgery is generally reserved for stage III and IV cystocele.² Exercise therapy is usually effective in grades I and II only. Surgery is generally not performed unless the symptoms of the prolapse have begun to interfere with daily life routine activities. The fourth degree pertains to the entire bladder which protrudes completely outside the vagina and it is usually associated with other forms of pelvic organ prolapse (uterine prolapse, rectocele, enterocele).³

Exercise therapy is a frequently used treat chronic Lower back pain (LBP) and is one of several interventions which evidence suggests is moderately effective.⁴ In the past, the cystocele has

been managed through pessaries, cones and surgery, but some studies also indicate the kegel's exercises are helpful for those with weak pelvic muscles *that surround the abdominal viscera*.⁵ A pelvic floor exercise, more commonly called a Kegel exercise, consists of contracting and relaxing the muscles that form part of the pelvic floor.⁵ The studies show that measures to strengthen the pelvic muscles may improve prolapse symptoms in mild to moderate cystocele, also to some extent decrease lower back pain.⁶ The classification of cystoceles is usually based on the Baden-Walker halfway system.⁷ *The aim of this study was to determine the effect of kegel exercises on back pain in patients of cystocele.*

METHODOLOGY

The study was conducted in the Department of Rehabilitation, Shifa International Hospital, Islamabad from May, 2012 to November, 2012. After consecutive (non probability) sampling, 50 patients were selected. The study was approved by the Hospital Ethical Committee and Written Informed consent was taken from all patients. Other

causes of back ache were excluded after careful history taking and examination (Lumbosacral Xray) and after Orthopedic consultations. Patients were randomly allocated by lottery method to either group A (Experimental) or group B (Control). Inclusion criteria was patients of age 20-40 years with either grade I or grade II. Close ended questionnaire was used as data instrument for the survey.

Data regarding patient's age, number of children, and cystocele grade was taken. These patients were taking analgesics two to three times a week (sometimes once a day). All the patients who used IUCD (Intrauterine contraceptive devices) were excluded as they could lead to backache. The back pain grading was done by visual analogue scale where patients were explained the grading of pain from the scale of 1 to 10 and then asked to grade their pain scores. Visual Analogue scale (1-3= minimum to mild pain, 4-6= moderate pain, 7-10= severe pain).

In group A, the physiotherapist guided the patients to perform kegel exercises. They were evaluated every month for the correct technique. They were advised to perform kegel exercises and postural exercises as well. These exercises were advised 5 repetitions x 2 sets and gradually 10 x 2-3 sets each day, at least for 4 months, along with the postural correction exercises (core strengthening exercises like sets of basic crunches, back extensions, standing chest stretch).⁸ Patients were asked to keep dairies with daily dates and comments on a monthly basis and evaluated and motivated after every one month.

In group B, the exercises were performed by doing 5 repetitions x 2 sets and gradually 10 x 2-3 sets each day, at least for 4 months. Patients were asked to lie flat on back; bend knees at 90-degree angle, feet flat on floor. Then tighten abdomen and raise buttocks off floor, keeping abdominal muscles tight. Then patients were advised to tighten buttocks, shoulder to knees being in straight line and position to be held for a count of five. Then they were asked to slowly lower buttocks to floor and the whole exercise to be repeated five to fifteen times.

SPSS v 16 was used for data analysis. Frequency and percentages were calculated for categorical

data. Student t test was applied for back pain scores and p value was calculated.

RESULTS

Six women (12%) were between ages 20-24, 14 (28%) were between age 25-30, 17 (34%) were between ages 31-35 years and 9 (26%) were between 36-40 years. 32 (64%) women were in Grade I, and 18 (36%) in Grade II of cystocele. Highest grade of cystocele was found in the females having 7 and above children; that was 3 out of 4 had grade II cystocele.

Table 1: Back Pain Scale.

Visual Analogue scale*	Number	Percent
1-3*	43	86.0
4-6*	5	10.0
7-10*	2	4.0
Total	50	100.0

*Visual Analogue scale (1-3= minimum pain, 4-6= moderate pain, 7-10= severe pain)

Back pain scale showed that 43 subjects (86%) had pain frequency between 0-3 (Table 1).

Table 2: Comparison of back pain in Kegel and postural exercise versus postural exercise alone.

	Total	Mean±SD
Back pain <i>Control group</i>	25	1.28±0.61
Back pain <i>Experiment group</i>	25	1.08±0.28

Kegel exercises had positive impact on back pain ($p=0.001$)n(Table 2). 27 (54%) women had no pelvic heaviness after Kiegel's exercises, 17 (34%) had slightly pelvic heaviness, while only 6 (12%) women had moderate pelvic heaviness.

DISCUSSION

Women with stress incontinence have weaker pelvic-floor muscles. Kegel's exercises are an effective intervention for stress and urge incontinence.⁵ Posture correction exercises are specific back exercises that focus on spine alignment.⁸ In our study, 43 women (86%) had pain frequency between 0-3. Our study showed that kegel exercises had positive impact in controlling the back pain amongst cystocele patients as the results were statistically highly significant

($p=0.001$). A similar study showed that pelvic floor muscle (PFM) exercise for 3 months significantly reduced pain and functional disability.⁹ Cochrane analyses has shown that pelvic floor muscle training (PFMT) is a first-line therapy for women with stress, urgency or mixed urinary incontinence (UI), especially in those receiving more guidance from health professionals.¹⁰

Our study showed that the feeling of pelvic heaviness subsided after Kegel exercises. Buchsbaum suggested that PFMT was better than no treatment or placebo treatments for women with stress or mixed incontinence and suggested that impact of adding PFMT to other treatments (e.g. electrical stimulation, behavioral training) was not definitely clear due to the limited amount of evidence available.¹¹ Conservative and surgical treatment options are available to address lower urinary tract disorders and prolapse. These options are generally customized and determined not just by clinical diagnoses, but also by treatment goals, patient's age, her level of activity and overall medical condition as well as her preference for treatment.¹²

Patients with greater descent of the leading edge of their prolapse reported less low back pain ($r = -0.176$, $P = .034$) and based on the data, pelvic organ prolapse was not a cause of pelvic or low back pain.¹³ However, another study suggested that women with pelvic organ prolapse with the leading edge of the prolapse beyond the hymenal remnants (some stage II and all stage III) had increased symptoms like lower back ache, and urinary incontinence, which may help define symptomatic pelvic organ prolapse.¹⁴

We observed important relationships between pelvic-floor muscle function and prolapsed. It is possible that pelvic-floor muscle dysfunction could both contribute to the development of prolapse and represent a consequence of disorders of LBP. Our study showed that the high grade (grade II) of cystocele was found in the females having 7 and above children, so increased parity was associated with high grade (grade II) cystocele.

When examining, or interviewing women who have pelvic pain and or back pain, practitioners must ask questions about history of urinary or fecal

incontinence, dyspareunia, or pelvic pain with certain activities.¹⁵ Several studies have shown associations between anatomic measurements of prolapse and specific symptoms, most notably the symptom of a visible and palpable protrusion or obstructive voiding symptoms. Yet correlations between symptoms and anatomic prolapse severity have been weak.¹⁶⁻¹⁹ Other investigators have evaluated the association between symptoms including back pain and the prolapse severity and reported that associations are generally weak to moderate.¹⁹ Limitations of the study include small sample size study. More studies on a bigger scale are needed for more pertinent results.

CONCLUSION

Pelvic floor muscle weakness may predispose women to symptoms of heaviness at vaginal area as well as back pain. Kegel Exercises are an excellent defense against back pain, most frequently encountered in women with cystocele. Kegel Exercises are a vital factor in total pelvic fitness.

Author Contributions:

Conception and design: Farwa Rizvi
 Collection and assembly of data: Taqdees Naqaish, Shaista Ambreen
 Analysis and interpretation of the data: Farwa Rizvi
 Drafting of the article: Farwa Rizvi
 Critical revision of the article for important intellectual content: Taqdees Naqaish, Farwa Rizvi, Shaista Ambreen
 Statistical expertise: Farwa Rizvi
 Final approval and guarantor of the article: Taqdees Naqaish, Farwa Rizvi, Shaista Ambreen
Corresponding author email: farwa.riz@gmail.com
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