



Physiotherapeutic Approach in Stress Urinary Incontinence with Prolapsed Uterus: A Case Report

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Authors' contributions

This work was carried out in collaboration among all authors. All author made best contribution for the concept, assessment and evaluation, data acquisition and analysis and interpretation of the data. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

The International Continence Society (ICS) describes incontinence as an objectively demonstrable loss of urine which is not voluntary and that is a social and/or sanitary issue. The complaint of leakage of urine, which is not voluntary on an effort made, on exertion, on sneezing or while coughing is described as Stress urinary incontinence (SUI). The intra-abdominal increases as the effort or exertion increases, and the urethral sphincter is not capable to sustain a pressure greater than the pressure applied on the urinary bladder. Eventually, leakage of urine occurs during the daily activities like lifting, laughing, jumping, while sneezing or coughing. In women, stress urinary incontinence is most common category of incontinence of urine. Even though it isn't a lethal illness. SUI has a number of negative effects on women's quality of life, including restricting social interaction and relationship and the personal relationships but also physical activity. Cystocele is the weakness of pubocervical fascia, which makes the urinary bladder to descend downwards and backwards against the anterior wall of the vagina. If this is a not taut then it will protrude. In more extreme cases a pouch of bladder sets up which holds on to the residual urine. The conservative treatment, a nonsurgical therapy, includes ameliorating the living standards, urinary bladder

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training, pelvic floor muscle exercises and strengthening. Kegel exercises are the most effective form of strengthening muscles of pelvic floor in addition are a noninvasive therapy and the use of vaginal weights or cones are not included. The rehabilitation and strengthening muscles of pelvic floor is facilitated and promote urine storage. The combination of Kegel's exercise along with other interventions for a span of six weeks has shown a significant improvement in the symptoms.

Keywords: Stress urinary incontinence; cystocele; kegel's exercise; bladder training.

1. INTRODUCTION

Urinary incontinence (UI) is more prevalent than any other chronic diseases like hypertension, depression, diabetes, with prevalence rates ranging from nine to seventy four percent [1]. Leakage of urine which is not voluntary, during effort or exertion exercise, as well as sneezing or coughing, is known as stress urinary incontinence (SUI). The intra-abdominal pressure rises through effort or exertion, as a result the urethral sphincter is not capable to sustain a pressure greater as that is applied on the bladder. Urine leakage happens as a result of daily tasks such as lifting, laughing, and so on., laughing, jumping, sneezing, or coughing [2]. Urinary incontinence is a problem that women of all the ages faces and is a prevalent problem [3]. According to estimates, stress urinary incontinence affects 49 percent of women who experience incontinence symptoms. Incontinence affects social, physical, psychological, and sexual facets of life, having a negative impact on one's self-esteem and quality of life [4]. The stress urinary incontinence (SUI) has three phases. This includes Phase I, which occurs only when a significant effort is made such as sneezing or while vomiting or while laughing, resulting in increase in the intra-abdominal pressure, Phase II – symptoms occurs when moderate exercise like walking, or while lifting, or while jogging, leading to increase in the intra-abdominal pressure, Phase III – symptoms appear when limited physical exertion, leading to increase in intra-abdominal pressure [5]. A cystocele, also known as a prolapsed bladder, is a medical disorder in which a woman's bladder protrudes through her vaginal opening. Some people do not show any signs or symptoms at all. Others can struggle to start urinating, have urinary incontinence, or urinate frequently. Some people do not show any signs or symptoms at all. Patients in the SUI group consisted of 87.7% cystourethrocele, 93.4% percent Grade I or II cystocele, with 6.6%nt cases with Grade III cystocele, that was substantially greater than that of the prolapse group [6]. According to literature, while surgical treatment for SUI is more

successful, conservative treatment (non-surgical interventions), for older women or those with minor symptoms, is now proposed as a first-line therapy. Ameliorating the living standards, improved diet, bladder training, exercises of muscles of pelvic floor are examples of nonsurgical conservative treatments. The most effective way to strengthen muscles of pelvic floor is Kegel exercises and they are a non-invasive therapy which doesn't include the use of vaginal weights or cones [7]. Urinary incontinence as the post-surgical complications may all be prevented and treated with physiotherapy [8].

2. CASE DESCRIPTION

A case of 42 years old female who is a farmer, was apparently alright until she experienced pain in the abdomen. She came to the medical centre with chief complaints of pain in the abdomen, increase in the frequency of urination and maintaining the urine flow. The pain was of intermittent type of pain, radiating to the back, the pain measuring 9/10 on visual analog scale (shown in Fig. 1.), along with abdominal discomfort with no relieving factor since a year. The abdominal pain was more while menstrual flow and the pain decreased on medications. She also had an increase in the frequency of micturition and constipation in the last two months. She also had a complain of non-foul smelling white discharge, for the last last 15 days. With these complaints she was admitted on 2nd February 2021 for further management.

There is no past medical history. Appendectomy ten years ago, tubal ligation 18 years ago, and complete laparoscopic hysterectomy with left salpingectomy two weeks ago are all surgical history. On examination the vitals were stable, routine investigations like CBC, LFT, KFT were normal. On local examination, hypermobile urethra was seen. On palpation, tenderness was present in right lumbar region without any mass or lump. USG of abdomen and pelvis was done. No obvious abnormality detected. The uterus – 6.9 x 3.2 x 2.9 centimeters and the endometrial

thickening was 5 mm. The right and left ovary was normal. The cervix appeared bulky. X-ray of abdomen in erect position was taken (seen in Fig. 2).

The diagnosis was confirmed based on clinical examination and symptoms presented by the patient. This confirmed that the patient is a case of stress urinary incontinence along with cystocele and cervicitis. Antibiotic were given for cervicitis. Physiotherapy intervention was started after three weeks of the operation.

2.1 Therapeutic Intervention

1. Kegel exercise

Pelvic floor muscle technique is another name for the Kegel exercise. Strengthening muscles of pelvic floor, which protects uterus, bladder, small intestine, and rectum and encourage urine storage, has been found to be beneficial for the recovery of stress urinary incontinence and cystocele [9]. When it comes to treating incontinence, this suggests a possible benefit

[10]. Kegel exercises can be done any time you are sitting or lying down. Always try to do Kegel exercises with an empty bladder. The sessions of 30 to 40 minutes, 3–4 times a week was done for 6 weeks. Each session included three sets of ten contractions accompanied by a period of relaxation. In the first two weeks, the sessions consist of five seconds of contractions and relaxation of ten seconds. Following this, two weeks session is done with 10 seconds contractions and relaxation of 10 second were performed. During the last two weeks of the six-week session, the sessions featured twenty seconds contractions accompanied by twenty seconds relaxation. This indicates a potential when treating GSI [10].

2. Squeeze and release

Squeeze and release exercises are done by squeezing and then releasing muscles of pelvic floor. The differences between with this and the Kegel exercise is how long you keep the squeeze. Squeezes and releases are done in quick succession (short squeezes) or by keeping

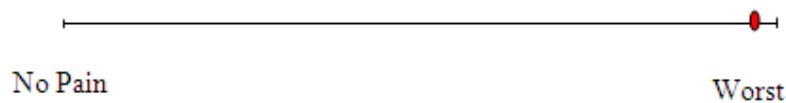


Fig. 1. - Pain Assessment over the Visual Analog Scale (VAS) showing extent of pain

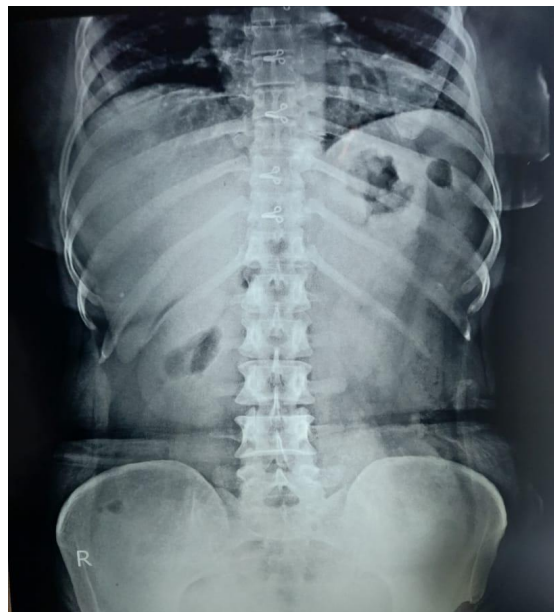


Fig. 2. X-Ray in erect position in A-P view

the grip for prolonged periods of time (long squeezes) . After rapidly squeezing and relaxing the muscles of pelvic floor, you can reinforce pelvic floor muscles in addition to this it helps to prevent incontinence symptoms. Sit in a chair or on the floor to find a suitable spot. Squeezing for a short or long period of time. (For short squeezes- squeeze the muscles of the pelvic floor for 1 second and rapidly release; for long squeeze - keep the squeeze for 5-10 seconds and slowly release.) Enable for a brief delay of 3-5 seconds. In a single session, this can be done up to 20 times. Doing the workout three times a day is recommended.

3. Hip bridge/pelvic bridging

Hip bridges are an excellent type of exercise for tightening of the buttocks and to strengthen pelvic floor muscles. This is achieved by laying on back and bending the legs with flat feet on the floor and is hip width apart, with the arms by the shoulders, palms facing out. Raise the buttocks above the ground by squeezing muscles of pelvic floor and keeping hands by sides, palms to the floor. For 4-7 seconds, keep this position. Drop the buttocks to the floor by relaxing it. Repeat 3-5 times or more after a rest of 3-5 seconds.

4. Bladder training

Bladder training aims in interrupting the cycle. This involves teaching the patients how to void on a specific schedule rather than whether they feel the need to. Techniques to suppress the urge, such as distraction and calming, were learned. The patient may also be instructed to contract muscles of pelvic floor voluntarily in order to improve urethral pressure, prevent detrusor contractions, and control urinary leakage.

5. Behavioural therapy

Behavioural therapy focuses on dietary changes including management of the fluid or management of the diet, along with weight control, and also the bowel control. As the patient also complained of constipation. It's essential to educate the patient how to prevent straining. There is also information and education regarding the normal function of lower urinary tract. Patients should be aware of the bladder's and pelvic floor muscles' functions.

3. DISCUSSION

Involuntary leakage during effort or exertion is referred to as stress urinary incontinence. SUI

along with cystocele is rare. Prevalence vary depending on the population studied, about half of the adult women are estimated to be affected. However, only 25% - 61% of those women seek care. Stress urinary incontinence (SUI) a disorder that is often under-reported and under-treated [11]. This may be attributable to embarrassment, lack of understanding regarding the treatment choices, or a perception that urinary incontinence is an unavoidable part of growing older [12].

These preliminary analyses provide several intriguing results. This intervention resulted in a substantial reduction in symptoms, implying that both behavior-based therapies would help stress incontinence management. Muscles of pelvic floor were rehabilitated and improved with physiotherapy treatment, resulting in a reduction in symptoms. The patient was able to recover easily and resume regular activities due to a thorough recovery plan that included a home exercise routine [13]. A surgical procedure leads to major physical and an emotional risks, in addition to social and financial costs [14]. Other related studies were reviewed [15-19].

4. CONCLUSION

Unfortunately, many people who are affected by this issue feel that surgery is the only option for recovery, and they are apprehensive about undergoing it for obvious reasons. As a result, it appears that developing the standards for physiotherapeutic management in the area of stress urinary incontinence treatment, as well as seeking out the most efficient and least invasive therapeutic approaches, is essential.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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