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Case Report

Rehabilitation of Women with Stress urinary incontinence: A case report

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Abstract

Introduction: Urinary incontinence can be evident in women, after multiple child birth or with increasing age. The nonsurgical management is considered as the first line of management, the preliminary management of simple SUI includes a variety of noninvasive interventions, including behavioral modification, Pelvic Floor Exercises (PFEs) with or without biofeedback, and other accessory teaching aids.

Case Report: The purpose of the present study is to find out if repetition of pelvic stabilization exercise impacts upon the management of stress urinary incontinence. For the management of Urinary incontinence, she has been treated by A Bangla booklet on urinary incontinence, Kegal exercises and pelvic floor exercises in a booklet instruction in Bangla, an exercise log book to maintain exercise. All the pelvic floor exercise started by 10 repetitions of exercise each, increasing 10% of exercise in each week for 4 weeks duration. After 4 weeks clinically significant improvements found in strength and endurance of pelvic floor muscles and ICIQ- UI questionnaire (brief).

Conclusion: Stress urinary incontinence can degrade patient's physical, functional and daily living status. Structured exercise therapy determined by physiotherapists contributes to the improvement of muscle function, function of genito-urinary system and quality of life for these patients.

Keywords: Kegal exercise; Physiotherapy; SUI

1. Introduction

urinary incontinence followed by can be defined as "Involuntary discharge of urine as a outcome of physical actions that surge abdominal pressure on the urinary bladder without detrusor contraction or over distended bladder. Classification is related to amount of leakage, succession and opening of the neck of bladder and urethra deprived of bladder contraction, and sphincter deficiency" [1]. The symptoms include loss of less than fifty milliliters of urine occurring with increased abdominal pressure, loss of urine occurring with increased abdominal pressure [2]. The nonsurgical management is considered as the first line of management, the initial management of modest SUI involves a variety of noninvasive interventions, counting modification of behavioral, exercises of Pelvic Floor Musculature (PFEs) with or without biofeedback, and other accessory modified education aids [3]. Stress urinary incontinence can be evident in women, after multiple child birth or with increasing age. There is a study that investigated two hundred women with low back pain and found that more than seventy percent of them suffer from urinary incontinence (UI) [4]. Recent evidences suggest stabilization exercise focusing on pelvic floor beneficial for increasing pelvic floor muscle strength along with endurance, and transverses abdominis muscle strength additionally functional ability [5]. The repetition of pelvic floor stabilization has several instructions ranging from 10 repetitions to 30 repetitions per set 3 to 5 times in a day for 6-12 weeks. The repetition protocol is not defined and in Bangladesh patient usually don't take physiotherapy for 12 weeks. The goal of the study is to determine if repetition of pelvic stabilization exercise impacts upon the management of urinary incontinence. The objectives of the study were to observe the impact of structurally repeated pelvic floor strength & endurance, transverse abdominis strength and functional disability in stress urinary incontinence patients.

2. Case Report

2.2 Subjective Information

Patient was a female, Patient's code: 19.01.0037390, 36 years old, Height: 61 inch, Weight: 48 Kg's. Her address was Nagorkanda, Post office: Kalipu, Thana: Nobinagar, District: B.baria.

2.3. Socio-demographic information

She was a housewife, married, living in a small family with 2 children. She was living in rural area; her educational status was secondary education. She was Muslim, no habit of Smoking/ Jorda and her past medical history was low back pain.

2.4. Incontinence related questionnaire

3.1 Duration of Incontinence: 90 days

3.2 Had any related surgery in abdomen: No

3. Objective Assessment

3.1. Treatment Details

Interventions Provided

For the management of Urinary incontinence, she has been treated by:

- A Bangla booklet on urinary incontinence (Annexure 1)
- Kegel exercises and pelvic floor exercises in a booklet instruction in Bangla
- An exercise log book to maintain exercise.

The interventions are provided in annexure 1

All the pelvic floor exercise started by 10 repetitions of exercises each, increasing 10% of exercise in each week for 4 weeks duration.

3.2. Outcome

On the first week her Pelvic Floor Strength in Oxford Muscle Grading was 2, Abdominal Muscle strength in Oxford Muscle Grading was 2, Pelvic floor endurance in single contraction was 7 seconds and abdominal muscle endurance in single contraction 6 seconds. The total ICIQ sum was 12. On the second week her Pelvic Floor Strength in Oxford Muscle Grading was 3, Abdominal Muscle strength in Oxford Muscle Grading was 3, Pelvic floor endurance in single contraction was 9 seconds and abdominal muscle endurance in single contraction 9 seconds. The total ICIQ sum was 10. On the third week her Pelvic Floor Strength in Oxford Muscle Grading was 3, Abdominal Muscle strength in Oxford Muscle Grading was 3, Pelvic floor endurance in single contraction was 12 seconds and abdominal muscle endurance in single contraction 12 seconds. The total ICIQ sum was 8. On the fourth week her Pelvic Floor Strength in Oxford Muscle Grading was 4, Abdominal Muscle strength in Oxford Muscle Grading was 4, Pelvic floor endurance in single contraction was 15 seconds and abdominal muscle endurance in single contraction 15 seconds. The total ICIQ sum was 4.

4. Discussion

The case was a diagnosed case of stress urinary incontinence. The stress urinary incontinence has been diagnosed by asking the patient whether she has any leakage of urine during any abdominal pressure. The diagnostic protocol merges with the instructions of assessment of stress urinary incontinence by International Classification Diseases (ICD-10) manual. Also, the ICIQ questionnaires has been used to evaluate the incontinence. The ICIQ-UI Brief Form is a short and psychometrically strong self-completed questionnaire for assessing the occurrence, severity and impact on quality of life (QoL) of urinary incontinence in women in research and medical practice all over the world. It has a scale beginning with 0 and conclude with 21. The ICIQ-UI Quick Form offers a brief and strong measure to assess the effect of symptoms of incontinence on outcome. This brief and simple questionnaire will also be of use to general practitioners and clinicians in both primary and secondary care institutions to screen for incontinence, to obtain a brief yet comprehensive summary of the level, impact and perceived source of symptoms of incontinence then to facilitate patient-clinician debates. Its shortness also makes the ICIQ-UI Short Form a model study tool. Kegal exercise has been chosen as intervention. Moderate medicines, a nonsurgical treatment, incorporate improving the way of life, bladder preparing, pelvic floor muscle activities, biofeedback, and the electrical incitement of pelvic muscles [6]. Kegel practices are the most mainstream technique for strengthening pelvic floor muscles and are noninvasive treatment with the end goal that they don't include the position of any vaginal loads/cones. They were first depicted in 1948 by the American gynecologist Anold Kegel. They are the most practical treatment and contrast from different treatments in that the patients can do them independent from anyone else whenever, anyplace, while doing other work, and without ordinary medical clinic visits. The patients just should be prepared in how to get their pelvic floor muscles. Most examinations show that Kegel practices consistently strengthen the pelvic muscles [7]. Be that as it may, practically speaking the aftereffects of patients shift contingent upon whether they practice their pelvic floor muscles in the wake of recognizing them, how truly they

exercise, and how much trust they place in the activities themselves. Henceforth, these examination results should be basically assessed regarding real practice [8]. Additionally, a few examinations have detailed orderly audits on pelvic floor muscles practices yet have secured the female urinary incontinence with stress, encourage, and blended UI or have managed all nonsurgical treatment including drugs [9]. All in all the examination demonstrated the improvement of SUI indications in moderately aged ladies who did Kegel practices and included unbiasedly confirmed information, explicitly information from both the cushion test and vaginal perineal muscle contractility information [10]. Despite the fact that the Kegel practice strategy has not yet been institutionalized, these outcomes reliably show the support of pelvic muscles and confirm that Kegel practices are for sure a protected technique for mediation. Be that as it may, the references utilized in this examination for the most part manage momentary mediations of around a quarter of a year, and further improvement in the counteraction and the executives of urinary incontinence in premenopausal moderately aged ladies utilizing Kegel practices requires longer-term considers.

Q 4.1 Pelvic Floor Strength in Oxford Muscle Grading	Grade 2
Q 4.2 Abdominal Muscle strength in Oxford Muscle Grading	Grade 2
Q 4.3 Pelvic floor endurance in single contraction	7 Seconds
Q 4.4 Abdominal muscle endurance in single contraction	6 Seconds

Table 1: Outcome in the first week.

4.5.1 How often do you leak urine?	4 – Several times a day
4.5.2 How much urine do you usually leak?	2 – A small amount
4.5.3 Overall, how much does leaking urine interfere with your every day's life?	6
Total ICIQ sum	12
When does urine lick?	□ Leaks during cough or sneeze

Table 2: International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF).

Q 4.1 Pelvic Floor Strength in Oxford Muscle Grading	Grade 3
Q 4.2 Abdominal Muscle strength in Oxford Muscle Grading	Grade 3
Q 4.3 Pelvic floor endurance in single contraction	9 Seconds
Q 4.4 Abdominal muscle endurance in single contraction	9 Seconds

Table 3: Outcome in 2nd week

4.5.1 How often do you leak urine?	3- Limited times a day
4.5.2 How much urine do you usually leak?	2 – A small amount
4.5.3 Overall, how much does leaking urine interfere with your every day's life?	5
Total ICIQ sum	10
When does urine lick?	□ Leaks during cough or sneeze

Table 4: International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF)

Q 4.1 Pelvic Floor Strength in Oxford Muscle Grading	Grade 3
Q 4.2 Abdominal Muscle strength in Oxford Muscle Grading	Grade 3
Q 4.3 Pelvic floor endurance in single contraction	12 Seconds
Q 4.4 Abdominal muscle endurance in single contraction	12 Seconds

Table 5: Improvement in 3rd week.

4.5.1 How often do you leak urine?	2- A few times a week
4.5.2 How much urine do you usually leak?	1- very small amount
4.5.3 Overall, how much does leaking urine interfere with your every day's life?	4
Total ICIQ sum	8
When does urine lick?	□ Leaks during severe exhaustion

Table 6: International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF)

Q 4.1 Pelvic Floor Strength in Oxford Muscle Grading	Grade 4
Q 4.2 Abdominal Muscle strength in Oxford Muscle Grading	Grade 4
Q 4.3 Pelvic floor endurance in single contraction	15 Seconds
Q 4.4 Abdominal muscle endurance in single contraction	15 Seconds

Table 7: Improvement after 4th week

4.5.1 How often do you leak urine?	1- Occasionally
4.5.2 How much urine do you usually leak?	1- very small amount
4.5.3 Overall, how much does leaking urine interfere with your every day's life?	2
Total ICIQ sum	4
When does urine lick?	□ Leaks during severe exhaustion

Table 8: International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF).

4. Conclusion

Stress urinary incontinence can be evident with lumbar disc herniation and together these impairments can degrade patient's physical, functional and daily living status. Structured exercise therapy determined by physiotherapists contributes to the improvement of muscle function, function of genito-urinary system and quality of life for these patients.

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