



A Case Report on Pelvic Floor Dysfunction

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Study

ABSTRACT

Background: Pelvic floor dysfunction and pelvic myofascial pain are treatable and common musculoskeletal conditions. Understanding the relationship between pelvic girdle and pelvic floor muscles (PFM), hips and spine will help the practitioner to diagnose and treat these conditions. Pelvic floor dysfunction and pelvic pain are treated with clinical examination and complete medical history of PFMs. Treatment is a in cooperatives approach, which consists of medications, pelvic floor physical therapy, injection and other treatment options.

Case Presentation: We are presenting case of 40 female with complaints of pain in abdomen and discomfort during micturition. On evaluation she was diagnosed with the pelvic floor muscle dysfunction. For the management of same she was referred to physiotherapy department.

Treatment: For the management of pelvic floor dysfunction, various levels of physiotherapeutic interventions were given to the patient, which includes strengthening exercises, endurance exercises to improve the overall functional capacity of the patient.

Conclusion: This examines the physical and anatomical examination of the pelvic floor, discusses the epidemiology and definition of pelvic floor dysfunction and explains the physiotherapy approach to treating these common conditions.

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1. INTRODUCTION

Pelvic floor dysfunction (PFD) seems to be simple and complex process that develops secondary to multiple factors. Pelvic floor dysfunction is a broad spectrum variety of disorders that occurs when the ligaments and pelvic floor muscles are impaired [1]. With life expectancy, the incidence of PFD is increasing. It is a term that refers to a wide range of clinical structure consisting defecation disorder and excretory lower urinary tract such as anal incontinence and urinary, over pelvic organ prolapsed and active bladder, diastasis recti including sexual disorder. Pelvic organ is surrounded by the tissues may have increased or decreased sensitivity irritation resulting in pelvic pain [2].

In health care system, it is a financial stress and affects women's quality of life. To decrease PFD strategies are applied are focused on the course of pregnancy, management and mode of delivery and methods of pelvic exercises. Non modifiable risk factors are maternal age, position of the foetus and foetal circumference. PFD is a heterogenous pathological condition and the effects of vaginal delivery, pregnancy, caesarean delivery and possible risk factors of PFD may be different from each other. Although numerous studies shows vaginal delivery affects muscles of pelvic floor structure and there functions in a negative way, there is not enough confirmation to approve selective caesarean delivery in order to prevent development of PFD [3]. During childbirth and pregnancy relax pelvic floor tissue and reduces pelvic floor muscle strength (PFMS) which is the dormant stage of PFD. Early PFD

changes are electro physiological change and biochemical change in the pelvic floor supporting tissue, and symptomatic pelvic floor disorders can occurs if the injury develops further. Diastasis recti abdominis (DRA) is the enlargement of the edges of the rectii abdominis at linea alba [4]. According to the theory of pelvic dynamics, weakness of abdominal wall may affect the abdominal, thoracic and pelvic dynamic resulting in the force from the diaphragm in the thorax and the abdomen being applied in the pelvic floor muscles (PFMs) rather than being applied to the Sacro coccyx. Additionally it has been hypothesized that if the abdominal muscles are weak, then the abdomen cannot respond when the PFMs contract, and therefore the PFMs is weakened [5].

2. CASE PRESENTATION

A 40 years old female, has been admitted in gynaecology department on 9/10/21 with chief complains of urinary issues such as painful urination, bowel strains, constipation, low back pain, pressure in pelvic region & pain in pelvic region since last 15 days.

3. ASSISSMENT

3.1 Perineometry/ Perineometer

Pelvic Floor Muscle Strenght measured by a Perineometer is a device which is used to evaluate the pelvic floor muscular strength (PFMS). Along with the assessment of pressure it is also used in teaching pelvic floor muscle exercises so it is also called Pressure Feedback.



Fig. 1. Use of perineometry-It helps to increase the intra abdominal pressure

3.2 Lower Abdomen Strength Test

It is a test which is used to assess lower abdominal strength; subject lies in a supine position on a bed with arms rested behind the head; physiotherapist may assist in raising the legs up to a vertical position (alternate leg may be raised if needed) keeping the knees straight; subject then perform a posterior pelvic tilt and maintain the position while slowly lowering the legs to horizontal; strength is graded on the ability to keep the low back flat on the surface; the angle at which the back arches is noted and correlated with Kendall's grading system.

4. INTERVENTION

4.1 Pelvic Floor Strengthening Exercises

The pelvic muscles support the uterus, bowels and bladder. When they contract, the organs are lifted and the openings to the anus, vagina and urethra are constricted. Urine and faeces are released from the body when the muscles are relaxed. In sexual function, the pelvic floor muscles also play an important role. When we strengthen these muscles, there is reduction of pelvic pain during sex and increase the ability to

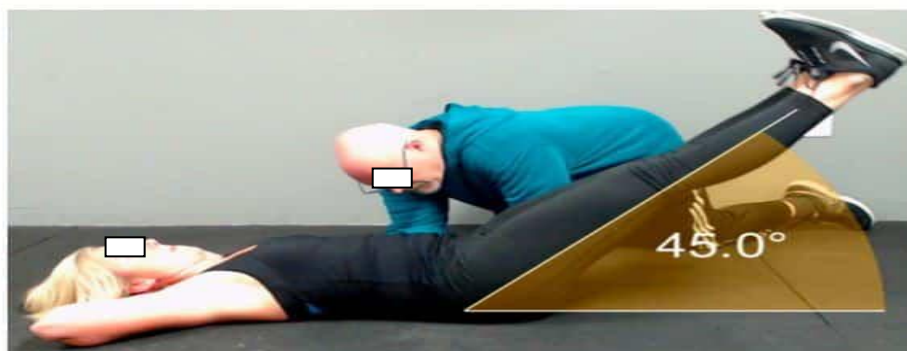
achieve pleasant sensations. The pelvic floor muscles support the baby during pregnancy and helps in childbirth. Childbirth and Pregnancy can cause to weaken the pelvic floor muscle and other factors like obesity, chronic coughing, heavy lifting and age.

5. KEGEL'S EXERCISE

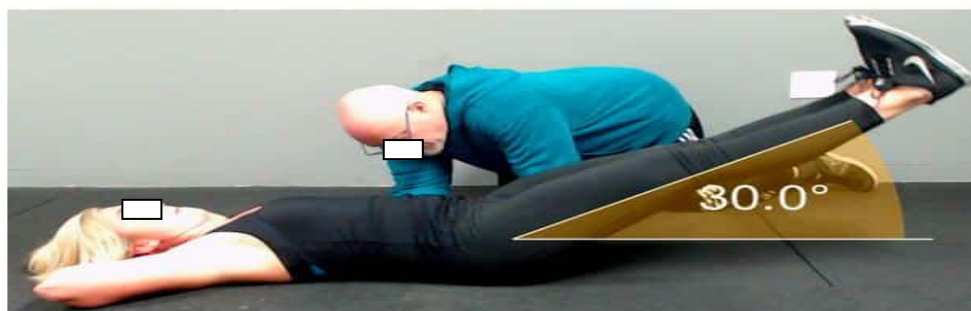
Pelvic floor muscle strengthening or Kegel, involves contracting and relaxing the muscles of the pelvic floor. From Kegels exercise, if you experience urine flow while coughing, laughing, sneezing, jumping or if you have a strong desire to urinate just before losing a large amount of urine [6].

5.1 Main Muscles Worked: Pelvic Floor

1. Identify the right muscles. The easiest way to do this is to stop urination midstream. These are your pelvic floor muscles.
2. To perform Kegels exercise, muscle is contracted and hold for 5 sec and then release for 5 seconds.
3. Advise patient to do repetitions 10 times & 3 times a day for 6 weeks.



Leg Position at 45 degrees (Good -)



Leg Position at 30 degrees (Good)

Fig. 2. Legs position



Fig. 3. Back Strengthening Exercises

5.2 Back Strengthening Exercises

The goal of back strengthening exercise is to condition the muscles to give better support to the spine and resist stress, which can relieve neck and back pain. Most strengthening exercises of back focuses on the core muscles, including the gluteus, abdominal and hip muscle in addition to muscles that surrounding the spine. Back strengthening exercises helps to –

- Reduce spinal discs and joints stress.
- Overall posture and better spinal alignment.
- Relax the patient with movements that may cause pain, e.g. twisting , lifting , bending .

In most cases, 2 or 3 times a week strengthening exercises are recommended to a patient and as a part of an overall exercise program.

Chart 1. Oxford scale for pelvic floor dysfunction

Oxford Grading Scale modified by Laycock.

Oxford Grading Scale by Laycock

0	No muscle activity
1	Minor muscle “flicker”
2	Weak muscle activity without a circular contraction
3	Moderate muscle contraction
4	Good muscle contraction
5	Strong muscle contraction

6. OUTCOME MEASURES

6.1 Quality of Life Scale

Quality of Life (QOL) is a complex concept that measures a person's health. The use of quality of life and discussion as a measurable health outcome that is increased since the past decades as healthcare had shifted from a disease-centric biomedical model to a more aggregate and focused well-being Model or bio psychosocial model. QOL has become more important with improved medical treatment and management of diseases, which has helped to lengthen the life of people in general and especially the peoples live with chronic diseases [7,8].

7. RESULTS

- Pre-treatment on perineometer pelvic floor strength was 5 mmHg.
- Post treatment on perineometer pelvic floor strength was 35 mmHg.

According to Oxford scale for pelvic floor dysfunction post treatment pelvic floor strength was Grade 4,i.e Good muscle contraction and quality of life improved after pelvic floor muscle strengthening . Patient is more independent to attend social gatherings , psychosocially independent.

8. DISCUSSION

Pelvic floor dysfunction incorporation of which procedure during training session would improve the strength of pelvic floor muscles, this advanced technology device that is Perineometer.

As per the study Wang Q, Yu X, Chen G, Sun X, Wang J. E t, al. discussed that to improve the pelvic floor muscle strength and strengthening exercises in the pelvic floor dysfunction females. Although the impact on the general that also helps to reduce the risk of urinary incontinence. In this condition, only back strengthening exercise is not effective for correct pelvic floor dysfunction. That's why the physiotherapy managements like Kegels exercises and abdominal strengthening is given to the patient for correct pelvic floor dysfunction with perineometer [9,10].

9. CONCLUSION

From the above study, we conclude that the physiotherapy treatment which is given to the patient is effective treatment. This is generally not life frightening and greatly affects the life of people.

CONSENT AND ETHICAL APPROVAL

As per university standard guideline, participant consent and ethical approval have been collected and preserved by the authors

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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