International Journal of Health Sciences and Research
[Indexed, Peer-Reviewed Journal]
Volume 15; Issue: 4; April 2025
Website: www.ijhsr.org
Case Report *ISSN: 2249-9571*

Physiotherapy Rehabilitation as a Treatment Approach to Improve Quality of Life Post Lower Segment Cesarean Section (LSCS) with Endometriosis: A Case Report

Dr. Reema Joshi[1] Ph.D., Dr. Chetana Tetgure[2] (PT), Dr. Yashi Shah[2] (PT), Dr. Sayali Sakpal[2] (PT), Dr. Mansi Bhatt[2] (PT)

[1]Professor, Dr. D. Y. Patil College of Physiotherapy, Pimpri, Pune- 411018.
[2] PG Student, Dr. D. Y. Patil College of Physiotherapy, Pimpri, Pune- 411018.

Corresponding Author: Dr. Yashi Shah (PT)

DOI: https://doi.org/10.52403/ijhsr.20250421

ABSTRACT

Cystic lesions known as endometriomas occur due to the endometriosis disease process. The primary site of endometriosis is the ovaries. According to research, adnexal cysts may be visible on an ultrasound screening in 4.1% to 24.9% of pregnant women. Physiotherapy intervention plays a crucial role in postpartum care, primarily focusing on the mother's physical, mental, and social well-being. Pain management, posture guidance, pelvic floor muscle strengthening, and core muscle strengthening are all part of postpartum care. Early postpartum ambulation has proven to alleviate postnatal depression. A 31-year-old female who underwent a lower segmental cesarean section (LSCS) experienced low back pain after giving birth. The patient's strength, quality of life, pelvic floor distress, pain, and disability were evaluated. Post-treatment, the patient reported decreased pain intensity on the NPRS, enhanced strength and quality of life, and reduction in disability.
This study concluded that following LSCS, lower back pain and functional disability can be alleviated with early postpartum rehabilitation. Therefore, early postpartum rehabilitation can improve mothers' quality of life by reducing postoperative complications and encouraging an early recovery.

Keywords: endometriosis, low back pain, lower segment cesarean section, physiotherapy, quality of life

INTRODUCTION

Endometriosis is the occurrence of ectopic endometrial tissues outside the uterine cavity, composed of endometrial glands and endometrial stroma that respond to hormonal stimulation. Theories include implantation, coelomic metaplasia, metastatic, and hormonal influences and other factors like immunological, genetic, and multifactorial factors can also contribute to endometriosis. Hormonal influences, particularly oestrogen, play a crucial role in the development of endometriosis. High estrogen production is a consistently observed endocrine feature of endometriosis. [1]

It is estimated that 5% to 10% women in the Western population have endometriosis; however, Asian women are thought to have higher prevalence of endometriosis,

accounting for about 15% of all women. [2] The increased use of ultrasound in the early trimester of pregnancy has led to a rise in the number of women receiving an ovarian cysts diagnosis in recent years. According to reports, 4.1% to 24.9% of pregnant women may have adnexal cysts visible on an ultrasound screening. Prevalence of ovarian cysts detected in early pregnancy, ovarian endometriosis account for 4-5% of cases.

Early lesions of endometriosis are papular, flame-like, and contain red vesicles filled with haemorrhagic fluid. As these vesicles age, endometriotic regions appear as dark red, blue, or black cystic patches. Chocolate cysts of the ovaries are the most significant indicator. It is characterised by vascular red adhesions, noticeable thickening of tunica albuginea, patches of dark brown tissue, and vascularity on cyst wall, located in ovary and pelvic wall. [1]

Physiotherapy intervention plays an important role in postpartum care which mainly focuses on the physical, mental, social well-being of the mother. Postpartum care involves relaxation, pain management, ergonomic advice, pelvic floor muscle strengthening and core muscle strengthening. An important goal of postnatal physiotherapy is to restore pelvic floor muscle strength and core abdominal muscle strength as these muscles give support to spine, pelvic girdle and also help to prevent complications. Research also supports that early ambulation after delivery can reduce postnatal depression. [3, 4]

The role of physiotherapy in postnatal care is very important and needs to be incorporated as a holistic approach while addressing the postpartum complications. This complication can be addressed in initial recovery period and thus enhance the recovery.

CASE PRESENTATION

A 31-year-old female, tailor by profession was admitted on 3rd October 2023 and had a Lower segment Caesarean section (LSCS) on at 11:08 PM. She was referred to physiotherapy department on 5 October 2023 with a complaint of low back pain post-delivery.

The patient had her last menstrual cycle on January 6, 2023. She discovered she was pregnant and confirmed it the following month. On April 8, 2023, she had her first ultrasonography examination, which revealed a well-defined oval-shaped cystic lesion in the left adnexa, measuring 9×6.5×4.4 cm and densely filled with low-level echoes. No torsion was seen. Additionally, from the first month of pregnancy, the patient developed pregnancy-induced hypertension (PIH).

On October 3, 2023, she started experiencing labour pain and was promptly taken to the hospital, where an emergency LSCS was scheduled due to a pre-existing left-sided ovarian cyst. During LSCS, ovarian cystectomy was performed. After giving birth, she began to feel pain which worsened during bending. Due to pain, the patient was unable to sit for an extended period of time and also experienced difficulty while doing routine tasks, therefore she was referred to the physiotherapy department. Before taking this case study, informed consent was taken from the participant.

CLINICAL FINDINGS

Patient examination was done in supine and side lying position. Grade 2 tenderness was present in the paraspinal region. The patient also reported dull pain at the paraspinal region. On pain assessment by the numerical pain rating scale (NPRS), the pain was found to be 2/10 during rest and 7/10 at the time of activity. For Disability, the Modified Oswestry Disability index was used and patient reported 80% disability due to low back pain.

Table 1: Assessment

Assessment	Pre	Post
Modified Oswestry disability index	25 (moderate disability)	20 (minimal disability)
Pelvic floor distress inventory (PFDI - 20)	18 (moderate)	16 (moderate)
Maternal Postpartum Quality of life Questionnaire	50	68
Pressure biofeedback	5	10
Numerical pain rating scale (NPRS)	7/10 on activity	4/10 on activity

Table 2: Obstetrics Ultrasonography reports

Date	Clinical findings
8th April 2023	Left ovarian cyst of 9×6.5×4.4 cm is seen in left adnexa which was densely filled with low level echoes. No torsion was seen.
23rd may 2023	Left ovary shows 6.0×4.5 cm endometriotic cyst

MANAGEMENT

Physiotherapy rehabilitation was done for 2 weeks with 5 sessions per week. Table no. 3 shows the rehabilitation protocol for the patient. [5]

Table 3: Physiotherapy rehabilitation for 1st week postpartum

	Goal	Treatment
PHASE 1 (First week)	Patient education and counselling	• Body mechanics in different positions like sitting, standing, lifting, and lying as well as transitions from one position to another. • Body mechanics with baby equipment and childcare. • Breastfeeding positions and importance of breastfeeding.
	Relaxation techniques	• Relaxation and breathing techniques • Pursed lip breathing technique • Diaphragmatic breathing technique • Thoracic expansion exercise
	Prevention of post-surgical vascular complications	• Active leg exercises • Early Ambulation
	Decrease incisional pain with coughing, movement, or during breast feeding	• Incisional splinting: support incision with pillow when coughing and while changing position. • Education regarding incisional care and risk of injury.
	Upper limb strengthening	• Active Range of motion exercises for shoulder, elbow and wrist. • Scapular sets
	Lower limb	• Static Hamstrings

	strengthening	• Static Quadriceps
	Pelvic floor muscle strengthening	• Contract relax with hold for 3-5 seconds for 10 times • Quick contraction 10 repetitions • Elevator exercises • Pelvic floor relaxation
	Improve core strengthening	• Static abdominal • Abdominal in drawing
	Ambulation	• 1 lap

Table 4: Physiotherapy rehabilitation for 2nd week postpartum.

	Goal	**Treatment**
PHASE 2 (Second week)	Upper limb strengthening	• Active exercise with resistance band for shoulder, elbow, wrist • Scapular sets
	Lower limb strengthening	• Dynamic quads • Spot marching • Hip Flexion/ extension in standing
	Pelvic floor muscle strengthening	• Contract relax with hold for 5-10 seconds for 20 times • Quick contraction 20 repetitions • Elevator exercises • Pelvic floor relaxation
	Improve core strengthening	• Static abdominal • Abdominal in drawing • Transverse abdominal activation exercises
	Back care	• Cat - camel exercises • Bridging exercises

DISCUSSION

This is a case report of a 31-year-old female who had undergone LSCS with left chocolate ovarian cyst removal with low back pain. The main goal for early rehabilitation was to reduce pain and to minimise postpartum complications. Low back pain can occur due to epidural and postural changes during pregnancy. The increased use of ultrasound in the early trimester of pregnancy has led to a rise in the number of women receiving an ovarian cyst diagnosis in recent years. It has been observed that 4.1% to 24.9% of pregnant women have adnexal cysts visible in ultrasound examination. [1]

Postpartum rehabilitation plays an important role in recovery. Women can face the following postpartum complications like postpartum depression, postnatal back pain, diastasis recti abdominis, thromboembolic events, cardiopulmonary complications if not treated well.

Phase 1 postpartum mainly focuses on patient counselling and education about postpartum physiological changes, body mechanics while sitting, standing and handling the baby. The mother is also made aware about importance of breastfeeding and different breast-feeding positioning to avoid back pain. Relaxation techniques along with breathing exertion were given to avoid respiratory complications. Incisional hygiene and splinting techniques help to avoid stress and strain over the sutures and enhance their healing process. Along with this, upper and lower extremity strengthening exercises help to maintain and improve strength. At this stage, core activation exercise like static abdominal should be started without giving much stress on the sutures. Pelvic floor muscle activation should be done which includes pelvic floor muscle relaxation and contract relax technique. [6, 7]

Phase 2 of rehabilitation concentrates on gains made in phase1 as well as strengthening the upper and lower limb with light resistance band exercises. The main focus is on Pelvic floor muscle training which was given with holds and the repetitions were increased gradually. Also,

strengthening exercises for back muscles like static back, cat and camel exercises and bridging with holds were started as per patient's pain tolerance. To improve core strengthening, static abs and activation of transverse abdominals were started with 10 repetitions.

CONCLUSION

Postpartum rehabilitation has a significant effect on maintaining and improving strength and also improving mobility. The early postpartum rehabilitation can be used to reduce low back pain and functional disability after LSCS. Focusing more on core activation exercise and lumbar stabilization exercise may help to reduce back pain and improve the strength of core muscles. As the pain reduces, mobility improves which further helps to improve the functional disability. There are many factors that can affect the range of motion such as pain, muscle tightness, poor ergonomics, etc. Early postpartum rehabilitation can reduce postoperative complications and facilitate early recovery thus improving the quality of life of mothers. Early ergonomic education and back care programs can prevent late complications related to postpartum.

Thus, there is an overall improvement in the quality of life of the mother postpartum.

Declaration by Authors

Acknowledgment: The authors would like to thank the Institution for supporting us in this case report.

Source of Funding: The author(s) received no financial support for the research, authorship, and/or publication of this article.

Author Contributions: CT and YS wrote the case report under the supervision of RJ. RJ is professor with specialization in general and community-based rehabilitation. All the authors contributed to the final manuscript.

Conflict of Interest: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Informed consent to participate: Written informed consent was obtained from the patient described in this case report.

Informed consent to publish: Written informed consent was obtained from the patient described in this case report.

Trial registration: Not applicable.

REFERENCES

1. Pateman K, Moro F, Mavrelos D, Foo X, Hoo WL, Jurkovic D. Natural history of ovarian endometrioma in pregnancy. BMC Womens Health. 2014 Dec;14(1):128.
2. Yen CF, Kim MR, Lee CL. Epidemiologic factors associated with endometriosis in East Asia. Gynecol Minim Invasive Ther. 2019;8(1):4.
3. Özkan SA, Kücükkelepce DS, Korkmaz B, Yılmaz G, Bozkurt MA. The effectiveness of an exercise intervention in reducing the severity of postpartum depression: A randomized controlled trial. Perspect Psychiatr Care. 2020 Oct;56(4):844–50.
4. Gluppe S, Engh ME, Bø K. What is the evidence for abdominal and pelvic floor muscle training to treat diastasis recti abdominis postpartum? A systematic review with meta-analysis. Braz J Phys Ther. 2021 Nov;25(6):664–75.
5. Margaret polden, Jill mantle. Physiotherapy in obstetrics and gynaecology. Second edition. 2004.
6. Wang H, Feng X, Liu Z, Liu Y, Xiong R. A rehabilitation programme focussing on pelvic floor muscle training for persistent lumbopelvic pain after childbirth: A randomized controlled trial. J Rehabil Med. 2021;53(4): jrm00180.
7. Sigurdardottir T, Steingrimsdottir T, Geirsson RT, Halldorsson TI, Aspelund T, Bø K. Can postpartum pelvic floor muscle training reduce urinary and anal incontinence? Am J Obstet Gynecol. 2020 Mar;222(3): 247.e1-247.e8.

How to cite this article: Reema Joshi, Chetana Tetgure, Yashi Shah, Sayali Sakpal, Mansi Bhatt. Physiotherapy rehabilitation as a treatment approach to improve quality of life post lower segment cesarean section (LSCS) with endometriosis: a case report. *Int J Health Sci Res.* 2025; 15(4):136-140. DOI: *https://doi.org/10.52403/ijhsr.20250421*

******