Case study

Physiotherapy intervention in post hysterectomy patient with urinary incontinence: A Case Report

Abstract:

The uterus and cervix are removed during a total abdominal hysterectomy. The majority of hysterectomies are performed to address fibroids, endometriosis, adenomyosis, pelvic organ prolapse, and malignancy. The second most common procedure on the female genital system is hysterectomy. Patients who have this treatment are at risk for problems that can be avoided with preventative interventions such as physiotherapy. A 48 year old who had undergone total abdominal hysterectomy with bilateral salphingo oopherectomy was referred for physiotherapy. Patient complained of pain in lower abdomen and difficulty in bed mobility and constant dripping of urine. Apart from medicinal intervention, physiotherapy was given for six days a week along with pain management activities, respiratory exercises, home exercise program and ergonomic advice for 4 weeks. A comprehensive rehabilitation plan including home exercise regimen can help in early recovery and restoration of daily activities rapidly and improve the quality of life of the patient.

Key words: total abdominal hysterectomy, salphingo oopherectomy, pre operative and post operative physiotherapy rehabilitation, home exercise program and ergonomic advice.

Introduction:

A hysterectomy is a medical procedure that removes the uterus as well as the cervix (neck of the womb). The uterus and cervix are removed during a total abdominal hysterectomy(1). The majority of hysterectomies are performed to cure problems such as fibroids, endometriosis, adenomyosis, pelvic organ prolapse, and malignancy. Uterine leiomayomas, uterine haemorrhage, chronic pelvic pain, genital prolapses, and malignant and premalignant illness of the uterus are the most common indications for this operation(2). Preoperative

pelvic pain is common in women who are having a hysterectomy for benign reasons. The most prevalent area for discomfort was in the centre of the pelvis, while 70 women experienced pain in the abdominal scar(3). Due to changed muscular integrity, length-tension relationship, and thoracoabdominal mechanism, pathophysiological alterations after abdominal surgery produce respiratory muscle failure, resulting in postoperative pulmonary problems (PPCs). The major purpose of physiotherapy following upper abdominal surgery (UAS) is to speed up recovery by preventing or resolving postoperative pulmonary complications (PPCs) and providing physical rehabilitation to make the transition back to premorbid level easier. Fatigue and restricted respiratory motions are common in the first few days after surgery(4).

Involuntary urine loss (leakage) is referred to as urinary incontinence. The illness affects both men and women, however it is far more common in women. Urinary incontinence symptoms are extremely common in women, have a significant impact on health-related quality of life, and are linked to significant personal and social costs. There are two types of urinary incontinence: stress urinary incontinence, which occurs when pee leaks as a result of physical activity, and urgency urinary incontinence, which occurs when urine leaks as a result of a sudden urgent desire to void. Mixed urine incontinence is defined as when a woman experiences both symptoms(5). Urinary incontinence poses substantial obstacles to an individual's quality of life. Both men and women with UI experience despair and anxiety, as well as decreased sexual pleasure and activity, as well as a negative influence on work productivity. Pelvic floor muscle re-education and strengthening, behavioural and dietary changes, and EMG biofeedback are all conservative therapy techniques(6). Many women are interested in complementary treatments such as yoga, an ancient Indian philosophy, lifestyle, and physical practise(7).

Patient Information:

This case is reporting a 48 years old female who is a housemaker, with endomorphic built and right hand dominance. The patient had complaints of irregular menstrual cycle occurring frequently every 15-20 days and heavy bleeding with clots, pain and weakness lasting for 8-10 days she took medicines but there was no relief so she came to hospital and for this reason sonography was done and fibroids were detected and for this reason surgery

was done. There was no history of diabetes, hypertension and thyroid disease. The menstrual history involved age of menarche was 15 years, flow lasts for 5-6 days and cycle length was 15-20 days with normal bleeding in each cycle.

She had undergone total abdominal hysterectomy with bilateral salphingo oopherectomy on 23rd October 2021 under general anesthesia. The patient was then referred to the physiotherapy for early mobilization and to improve the quality of life of the patient. The patient's chief complaints were pain at lower abdomen which was at suture site and constant dripping of urine while coughing, sneezing or laughing. The pain was constricting in nature which was getting aggravated on coughing, sneezing or laughing and relieved in supine and side-lying position. She rated the intensity of pain 7/10 on numerical pain rating scale during activity and mobility. The patient also complained of problems with bed mobility as a result of incisional pain, and he was unable to attend to the side lying posture.

Clinical findings:

After taking informed consent of the patient, the physical examination was performed. On General Examination patient was conscious ,cooperative and well oriented with time ,place and person and was comfortable in supine and sitting position. She was afebrile, pulse rate was 80 beats/min and respiratory rate was 18 breaths/min, thoracoabdominal type. Patient was examined in supine position.

On Observation, pallor was present, Icterus was absent, there was no clubbing, cyanosis, oedema feet. On Inspection there was no deformity, no muscle wasting, Length of scar on inspection was approximately 20cm with bandage. On Palpation Tenderness of grade 1 was present, temperature was slightly raised and there was slight spasm. Systemic examination- the examination of respiratory system revealed respiratory rate of 18 breaths/min chest wall was bilaterally symmetrical, breath sound normally heard. Examination of nervous system revealed no neurological deficit. Examination of cardiovascular system reveals pulse rate of 80 beats/ min, all peripheral pulses was present and heart sounds were normally heard. Examination of musculoskeletal system revealed abnormal posture- shoulder bilaterally symmetrical, rounded shoulder,

increased lumbar lordosis, ASIS symmetrical, no knee deformity and foot was in neutral position.

Table 1: Timeline:

DATE OF ADMISSION	20th October 2021
DATE OF EXAMINATION	24th October 2021
CT SCAN	22nd October 2021
USG ABDOMEN AND PELVIS	22nd October 2021

Diagnostic assessment:

CT SCAN:

- Overgrowth of smooth muscle and connective tissue in the uterus**.**
- monoclonal proliferation of smooth muscle cells.

USG ABDOMEN AND PELVIS:

- Enlarged uterus with big intramural fundal fibroid.
- Gaseous distension of abdomen with colitis bulky uterus with large intramural degenerated fibroid.

Fig 1: USG ABDOMEN AND PELVIS

The active lumbar spine range of-motion assessment of the patient, conducted in standing, was in all directions within usual functional limits. She described the hip pain as more superficial than deep. The patient displayed bilateral hip-active and passive range of motion that was within normal limits in all directions, but her familiar pain was actively and passively induced in all directions across the entire range of motion, even when performing end-range overpressure. A Thomas test was conducted and revealed a deficiency in the flexibility of the right muscle of the iliopsoas, creating her familiar pain.

Therapeutic intervention:

Our short term goals were to educate the patient about her condition, reduce her pain from 7/10 to 4/10 on NPRS, improve strength of lower abdominals, increase strength of pelvic floor muscles, improve bed mobility activities, improve respiratory capacity and prevent respiratory complications as the patient was under general anaesthesia. Long term goals were to maintain the strength of abdominal and pelvic floor muscles, to make the patient functionally independent, teaching home based exercise programs and teaching ergonomic advice to the patient. Intervention were started preoperatively and continued until post operative period.

Table 2. Detailed preoperative physiotherapy regime

Detailed preoperative physiotherapy regime is explained below		
Phase Pre operative physiotherapy phase 1 (Week 1)	Goal Patient education	Exercise Education about her condition, prognosis, post surgical complications, significance of physiotherapy and ergonomic advice.
	To prevent circulatory complications like DVT	Limb elevation, ankle pumps, ankle plantarflexion and dorsiflexion, active hip and knee flexion and extension
	To prevent respiratory complications	Deep breathing exercises (10 reps), splinting while coughing, sneezing and laughing
	Bed mobility to achieve independence in ADL's	She was taught how to come from supine to side lying and then in sitting
	To improve strength of pelvic floor muscles	Ask the patient to contract the muscles and hold the contraction as long as possible
	Posture and back care	She was encouraged to adopt supported positions by employing cushions or lumbar rolls strategically positioned.

Post operative physiotherapy regime is explained below		
Phase	Goal	Exercise

Post operative physiotherapy Phase 1 (1-2 week)		
	Patient education	Prognosis education, post-surgical problems, the significance of physiotherapy, and exercise guidance
	Positioning	Sitting and moving postures on a regular basis can help to improve ventilation and remove secretions.
	To reduce pain at incision site Posture and back care	Careful handling and relaxation. She was encouraged to sit, stand, and walk 'tall.' For rounded shoulders, stretch the pectorals. Preventing pressure sores using pressure relief and an air mattress.
	Mobility to increase independence	Taking a walk along the halls or around her bed. This escalated to them marching on the spot and dragging themselves from their bed to the chair. This increases lung volume, improves breathing, aids in secretion extraction, shortens her hospital stay, and makes it easier for her to discharge secretions.
	To prevent respiratory complications	Deep breathing exercises, active complications cycle of

		breathing techniques (ACBT), and autogenic drainage (AD) helped to splint cough by aiding the incision site.

	To increase pelvic floor muscle strength	She was asked to contract the muscles and hold the contraction as long as possible (10x3 reps).
	To increase strength of abdominal muscles	As soon as the pain allows, pelvic tilting and knee rolling of abdominal muscles exercises in crook lying began. She was instructed to contract her abdominal muscles as far as she could and keep the contraction for as long as she could.
	Rest	She was told to take a rest and was taught how to relax.
Phase 2 (2-4 weeks)		
	To increase pelvic floor muscle strength	She was instructed to contract her muscles and hold them for as long as she could (30x3 reps).
	To increase the strength of abdominal muscles	She was instructed to tense her abdominal muscles as much as possible and hold the contraction for as long as feasible.
	Mobility To maintain pelvic floor muscle strength	Stair climbing and all ADL initiated Coughing and sneezing exercises should be done on a regular basis, and muscles should be contracted when coughing and sneezing (counter bracing)
	To maintain the strength	Perform abdominal

	of abdominal muscles Safe return to daily activities and normal function and home exercise program	contractions regularly and during ADL. The patient was given a written workout plan and was advised to avoid heavy lifting. regimen of physical activity It was suggested that pelvic and core strengthening activities be performed.

Fig. 2. Follow up outcomes

Follow up and outcomes:

After 4 weeks, the patient was requested to return for another physical examination, but no concerns were observed or recorded. Five weeks following surgery, she resumed her household duties. At that point, the functional recovery was complete, with full ROM of the hip and knee joints at the end of the rehabilitation period, 5 weeks after surgery, with the patient receiving a 1/10 on the NPRS. There were no issues after the surgery.

Discussion:

Articles presenting various surgical methods, assessments, and treatments were included in this study. Regardless of whether solely or not, hysterectomized ladies and physiotherapeutic domain procedures were conducted pre and/or post-operatively.

Conclusion:

The case study found that physiotherapy treatment given soon after gynaecological surgery improves patients' quality of life and that a structured exercise programme is more beneficial to patients than traditional physiotherapy management. This should be emphasised to all patients after gynaecological surgery. Gentle workouts must be performed for at least six to eight weeks following surgery. The patient should ideally continue to undertake the pelvic floor exercises for the remainder of his or her life. All high-impact activities should be avoided for at least 12 weeks after surgery.

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