



“EFFICACY OF POST OPERATIVE PHYSIOTHERAPY ON COPD PATIENT IN CASE OF TOTAL ABDOMINAL HYSTERECTOMY WITH BILATERAL SALPINGO – OOPHERECTOMY” – A CASE REPORT.

Physiotherapy

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ABSTRACT

Now a days invasive surgeries become best treatable option for certain cancers or cysts. In females breast and uterine cancers with metastasis are more frequent now. At metastatic stage, total organ or system removal with surrounding tissues is the only choice for earlier cure as prophylaxis. In some conditions, the complete removal of uterus, cervix, ovaries and fallopian tubes was performed through abdominal incision which is called 'Total Abdominal Hysterectomy2 (TAH) with Bilateral Salpingo – Oophorectomy (BSO)'. In this case 57 years old obese female with DM, HTN & weak lungs was admitted on the complaint of post-menopausal bleeding, breathlessness, discomfort, palpitations, fever. After treating symptoms the further evaluation reveals Endometrial intraepithelial neoplasia with bulky uterus and COPD. Later stabilizing the patient undergoes TAH with BSO surgery. The early intervention of physiotherapy aids the patient in early recovery and prevents post pulmonary complications.

KEYWORDS

Endometrial hyperplasia¹, metastasis, post pulmonary complications, COPD, Physiotherapy³.

INTRODUCTION:

Endometrial cancer which was usually begins from lining of uterus and spreads to other attached organs such as fallopian tubes, ovaries. The root cause of uterine cancer includes Poly Cystic Ovarian Syndrome, Excessive oestrogen production without progesterone release, obese females etc. About 5% female Ca. Endometrium cases was prone to metastasis. The patient usually suffers with heavy vaginal bleeding, pelvic pain, weight gain, painful urination and becomes anaemic. In such complicated cases the surgeon chooses standard treatment to remove pathologically injured organs such as Total Hysterectomy (laparoscopic) or Total Abdominal Hysterectomy (open procedure) with Bilateral Salpingo – Oophorectomy.

The intervention of early physiotherapy prevents post pulmonary complications, restricted pattern of breathing, prolong hospital stay and promotes early recovery, quality of life and increases mortality rate after surgery.

Case Report:

A 57 years old obese female was admitted on complaint of Post - menopausal heavy bleeding, Shortness of breath, Pelvic pain with fever. Her past medical history shows HTN, DM, Post COVID, Asthma (from 10 years), CVA (1 year ago) with left facial palsy, B/L Pitting oedema on lower limb on previous hospital discharge summary. After treating the patient with Antipyretics, Antibiotics, Analgesics, Fluid management and O₂ therapy through mask. When vitals was stabilized, the further blood investigation reveals low Hb%, raised ESR, low potassium (hypokalaemia), low calcium (hypocalcaemia). US abdomen shows bulky uterus with thickened endometrium (17.5mm), MRI PELVIS reveals Endometrial Hyperplasia and biopsy shows endometrial intraepithelial neoplasia, pulmonary assessment shows COPD. After lot of reveals, the surgeon plans for Total Abdominal Hysterectomy (open) with Bilateral Salpingo – Oophorectomy (laparoscopic) procedures to remove uterus with fallopian tubes and ovaries to prevent metastasis.

After stabilizing and recovery from cardinal signs, blood transfusion and pre - operative tests was advised. Foley's catheter was placed to collect the urine. Anaesthesia was injected through IV and ventilated. The surgeon starts the procedure with lower midline incision (below umbilicus to pubis symphysis) to expose pathological area. Then surgeon removes carcinoma along with uterus and incision was closed with suitable sutures. Later, the surgeon starts laparoscopic procedure and makes three tiny incisions to insert catheter with micro camera for visibility. From other incisions, laparoscopic forcep instruments was inserted to remove both fallopian tubes with ovaries and incisions was closed. After procedure, the patient was shifted to ICU with ventilator. When the patient get conscious the ventilator was extubated and oxygenation through O₂ mask. The intervention of physiotherapy starts from POD – 1.

Physiotherapy Management:

Impact of early physiotherapy shows effective results and avert prolong hospital stay. It mainly aids for early recovery and improve

quality of life in surgical patients. In this case the interference of physiotherapy starts from POD – 1 itself in form of Chest physiotherapy and General physiotherapy.

Chest Physiotherapy⁴:

It plays crucial role to eradicate post – pulmonary infections and maintain lung volumes. It is the non - invasive tradition technique to drain mucus from respiratory tract and clear airway. In this case, the pre - operative routine shows COPD. Thus, main criteria of chest physiotherapy is to eliminate CO₂ and improve oxygenation. The following group of treatments takes place on post – operative patient.

i) Nebulizers & Rotahalers:

Nebulization mainly helps to loose thicken mucus in the form of aerosol therapy. Rotahaler is a device where powdered medicine was given through oral inhalation. In this case Duolin, Budecort, Mucomix are the respules used in nebulization at POD – 1 as TID dose. Rotacap Quik hale SF 50mcg/100mcg was prescribed in Rotahaler from POD – 2 to POD – 4 as BD dose.

ii) Active Cycle Of Breathing Technique (ACBT):

It is a breathing technique which was performed by patient to mobilise excess secretions from lungs. It consists of three phases namely breathing control, Thoracic expansion and huffing. The patient was kept in long sitting position with couch support, then therapist asked to inhale with nostril and exhale orally (repeat for 4 – 5 times). After deep breathing, thoracic expansion through full inspiration with nostril and relaxed expiration with oral cavity, later therapist was asked for forced expiration through huffing sound. By this procedure the mucus from peripheral airways mobilize to central airway and spitte.

iii) Diaphragmatic Breathing:

In this exercise, the patient was asked to hold one hand on rectus abdominis muscle and inhale with nose deeply, exhale with mouth. While exercise the patient feels abdomen bulges in and out which aids for strengthening for inspiratory muscles.

iv) Pursed Lip Breathing:

In this technique, the patient was asked to inhale slowly and deeply with nose and exhale through mouth with lips pursed. This exercise mainly focuses to improve oxygenation, breathing pattern, exercise tolerance, more output of CO₂.

v) Respirometer:

It is the mechanical inspiratory muscle training device which consists of three chambers with three balls. The inspiration is performed through mouth piece with sealed lip until the goal was reached. This exercise enhances lung capacity and prevents from lung collapse.

vi) Coughing:

It is a natural reflex mechanism to remove mucus from respiratory tract. The therapist encourages the patient to cough to clear the lungs which prevents from atelectasis.

General Physiotherapy:

i) Slr & Limb Movements:

Straight leg raising, knee flexion/extension exercises, Strong ankle toe movements are performed to prevent from DVT and bedsores.

ii) Lumbar Belt:

In this case lumbar belt was prescribed for additional support for sutures to prevent from incisional hernia.

iii) Ambulation:

Mobilization is an effective exercise which plays crucial role in early recovery. It also enhance the GI tract, bladder function and cardio pulmonary capacity. Due to obese the ambulation starts from POD – 2 to POD – 4 twice a day. From POD – 5 the patient increases ambulation from 4 – 5 times a day.

*On POD – 5 the patient is on room air.

*Above treatment plan done up to POD – 6.

DISCUSSION:

The main concept of post – operative physiotherapy after invasive abdominal surgery with laparoscopic procedure is to avert pulmonary infections, long time O₂ support, prolong stay and promote wound healing. In this case, the patient was admitted with COPD and obese with peripheral lower limb oedema. The physiotherapy starts from POD – 1 with ACBT and Forced Expiratory Techniques to clear mucus and breathing exercises to improve lung capacity. Especially, pursed lip breathing promotes the saturation, more output of CO₂ from respiratory tract, increase lung capacity. Inspiratory muscle training with manual and mechanical techniques had upgrade pulmonary functions and prevented from lung collapse. Straight leg raising, assisted exercises, Ankle toe movements reduced limb oedema. Ambulation with lumbar belt decreased the risk of pressure sore, incisional protrusions and improved physical activity of patient. At POD – 7, the patient was haemodynamically stable and discharged.

CONCLUSION:

The intervention of post - operative physiotherapy shows effective results in recovery of patient and got early progress in pulmonary status, wound healing, physical activities, ADL's performance and also prevents from lung collapse.

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