

Two Year Follow up Post Laparoscopic Hysterectomy with Core Exercises on Obesity and QOL – Evidence Based Study

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Abstract:

*An increased reports of hysterectomy were globally recorded. Weight gain following this procedure has an impact on the knee, back pain and quality of life. Aims & Objective of this presentation was to analyze the impact of core strengthening exercises on obesity and quality of life post hysterectomy. Materials & methodology: This study subject was treated from August 2015 until September 2017 with nonpharmacologic means of core strengthening exercises using Physioball with 15 specific exercises of twice a week frequency. Pre and post BMI, WC and QOL were recorded and analyzed with due statistical means Results: with $P < .01$ on BMI, WC and QOL as significant statistically, on obesity and enhanced quality of life using core strengthening exercises **Conclusion:** Outcome of this study findings can be extended to other post gynecological surgeries to maximize their quality of life.*

Keywords: *Quality of Life, Hysterectomy, Laparoscopy, Core Strengthening Exercises*

Quality of Life,

Introduction:

In the US, 25% of women undergo hysterectomy by the age of 60 years (Keshavarz et al 2002). One-quarter of the women will have a hysterectomy before menopause (Pokras 1988) and most frequent causes of hysterectomy to be performed were leiomyomas, dysfunctional bleeding, endometriosis and pelvic organ prolapse (Wise et al 2004). The vast majority of women undergoing hysterectomies experience relief of symptom that led to surgery and reports a high level of satisfaction with the procedure (Hartmann et al 2004) but weight gain is a frequent complaint post hysterectomy (Carlson et al 1994). Women who had a hysterectomy with intact bilateral ovaries weight more, have a higher body mass index and are more likely to be obese than women with intact uteri and ovaries (Howard et al 2005)

Aims & Objectives of this original case presentation was to analyze the impact of core strengthening exercises on obesity and QOL post laparoscopic hysterectomy

Keywords: BMI, WC, QOL

Background Information:

Mrs.XX, Aged 50 years, Mother of 3 children, nondiabetic, nonhypertensive, had a laparoscopic hysterectomy in May 2015 for intrauterine bleeding and fibroid, post-surgery within 3 months period, she noticed weight gain with complaints of knee and low back pain and is regularly treated with core strengthening and general body exercises. Using an air-inflated physioball until September 2017 from August 2015 with weekly twice frequency.

Her physical condition as on 30.11.2017

O/E

BMI: 24 kg/ m²

Waist Circumference: 91 cm

- Range of motion of extreme knee joints mild pain with restriction, other peripheral joints full and free
- Develops mobile kyphotic (Thoracic) posture frequently but post exercises / active correction she improves
- Motor power of spinal extensors and abdominal muscles are good
- She was able to walk for 30 minutes daily
- Performs daily activities with mild exhaustion at the end of the day

Materials & Methodology:

This original case presentation where the subject was treated during the period from August 2015 till September 2017, post laparoscopic hysterectomy with core strengthening exercises using Physioball with the frequency of twice a week. Set of 15 exercises were used for a period of 25-30 minutes of each session and the heart rate was used for the intensity of exercises. 60-70% of maximal intensity, these sessions were performed. Her BMI, WC, and quality of life before exercises and after two years of regular physiotherapy were recorded, tabulated, analyzed using due statistical means and presented as below:

Results: Table on results of paired student ‘t’ test on BMI, WC, and quality of life of the subject.

Parameter		Mean	SD	SE	t	P
BMI	Pre	27	1.732	1	3	<.01
	Post	24				
WC	Pre	102	6.35	3.66	3.05	<.01
	Post	91				
QOL	Pre	57	20	11.66	3.07	<.01
	Post	22				

No untoward incidence of pain, injury were reported during this follow up period. Whereas the study subject was able to attended to daily family needs, self-care, traveling, religious activities by sitting of floor, above all she was able to sustain her BMI and waist circumference in control with this two year follow up of continued physiotherapy is worthy to be mentioned here

Discussion: Critical analysis of this Study:

1. Is exercise alone enough on obesity post hysterectomy subjects?

Also, the association for obesity and disability were established (Walter etal 2009 & Reuser etal 2009). 32% of women had a weight gain of >5 pounds, and 18% had a weight gain of >10 pounds in a 1 year follow up post hysterectomy among 628 subjects (Matorras etal 1995). This study subject had an adequate reduction in obesity as shown in the results table. Qol of this subject post laparoscopic hysterectomy has improved with lowered obesity as inferred from table on results with statistical significance

2. Does laparoscopic procedure better than a transvaginal hysterectomy?

Laparoscopic hysterectomy was associated with shorter hospitalization, faster recovery, fewer postoperative infections compared with and hysterectomy (Jacobson etal 2006) with an increased laparoscopic hysterectomy of .3 % in 1990 (Farquhar etal 2002) to 11.8% in 2003 with decline in vaginal and abdominal hysterectomy

3. Is genetic factor, hormonal influences involved in post-hysterectomy weight gain?

Among 232 women between 40-50 years with regular mensural cycle and not taking hormones among Latin and white women found depressive symptoms, weight gain and physical inactivity (Juarbe etal 2006). Women undergoing hysterectomy had, and more pregnancies were more likely to have a tubal ligation and were of lower socioeconomic status as with educational levels (Brett etal 1997). With risk factor for uterine fibroids

women undergoing a hysterectomy and higher BMI (Wise et al 2005), the most common indication for hysterectomy among premenopausal women. Women had perception That weight gain after a hysterectomy, while they have not changed their diet pattern or exercises (Carlson et al 1994). Also, an analysis of indication for hysterectomy indicates weight gain with a diagnosis of fibroids or menorrhagia (Flake et al 2003), and it is well established that obesity as a risk factor for fibroids. Stewart et al 1992 women with higher BMI have nine point decrement in the physical functioning scale which was associated with back problems, knee arthritis and body pain (Colditz 1999)

4. What can other means of physical therapy be deployed on this subject?

Medical consequences associated with obesity and weight gain among women in premenopausal age is associated with higher risks for overall mortality, cardiovascular diseases, diabetes, osteoarthritis certain forms of cancer and depression (Dennis 2007) lower physical functioning and reduced quality of life (Fine et al 1999). Lifestyle intervention with physical activities to prevent weight gain from adulthood among women can be worked out as a prophylactic mean (Moorman et al 2009)

5. Does hysterectomy without oophorectomy influences on quality of life and obesity?

Among 184 vietnamese female between 47-57 years, age hysterectomy without oophorectomy had a higher weight gain of 9 kg (Kirchengast et al 2000). Women with abdominal hysterectomy had larger weight gain than laparoscopic or vaginal hysterectomy (Moorman et al 2009) and a longer period of recovery (Johnson et al 2006)

Conclusion:

Continued monitoring and adherence to physiotherapy for obesity and related musculoskeletal problems not only keep the individual functionally good but being a women, their family needs and day to day routine are enhanced in that family. Thus sustenance of health and physical functioning post gynecological surgeries should be emphasized by medical professionals, and regular follow up be encouraged with due care for vitamins, minerals supplement, and lifestyle modification. Being a case study is the limitation, and one parameter with core exercises was studied. Hence a larger sample size, more exercise variables, including other treatment outcome measures unanswered are highly recommended.

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