

The Impact of Application of Multimodal Approach on Expected Clinical Outcome for Post Illues Patients after Total Abdominal Hysterectomy

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Abstract: Background: Oral fluids and food are traditionally introduced slowly after total abdominal hysterectomy (TAH). This study examined the effect and tolerance of early oral intake following this surgery. Postoperative ileus (POI) is broadly defined as a temporary impairment of gastrointestinal (GI) motility, it leads to patient discomfort, decrease the mobility and prolongs both convalescence and hospital stay. **The aim** of the study was to evaluate the impact of application of multimodal approach on expected clinical outcome for post illues patients after total abdominal hysterectomy. **Design:** Quasi-experimental design was used. **The study was conducted in** the Obstetrics and Gynecology department in El-Minia General Hospital **from first of September 2011 to the last of February 2012.** **Sample:** Total samples of 40 female patient divided equally into two groups (control group and intervention group) were assigned to multimodal approach. **The results** also revealed that early feeding could be tolerated well in patients under going total abdominal hysterectomy TAH. Also the results shows that, with improvements in post operative nausea and vomiting and length of stay were noted in the early fed group with minimal medical benefits. **Conclusion:** This study concluded that early feeding and hydration after major gynecologic surgery results in decreases nausea and vomiting and decreases hospital stay, promote wound healing, optimizing patient condition before, during and after surgery and reduce the length of hospital stay. **Recommendation:** This study recommended that more approaches such as chewing gum, antiemetic drugs and laxatives should be applied to relieve the post operative complications especially illues after the total abdominal hysterectomy.

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Key Words: Early feeding, early immobilization, post operative illues, total abdominal hysterectomy.

1. Introduction:

Traditionally, patients are fed gradually following a total abdominal hysterectomy (TAH), often with holding a regular diet until resolution of the postoperative ileus (Flesher et al., 2008). Studies that examined early feeding after hysterectomy have shown to be safe and efficacious in this patient population (Pearl et al., 2002). Kraus and Fanning (2000) found that early feeding promoted bowel stimulation. Also Johnson et al. (2000) concluded that early feeding following most gynecologic surgeries would improve patient satisfaction and shorten hospital stay, thereby reducing costs. The main concern regarding early feeding is that it may not be tolerated because of postoperative ileus, causing nausea, vomiting, or loss of appetite (Martindale, Maerz (2006). Generally, studies have found that early feeding is associated with multiple benefits such as reduced length of hospital stay (Schidler et al., 1997). and reduced gastrointestinal morbidity (Frantina et al., 2002). With surgeries to the bowel, gut motility returns 4-24 hours in the small intestine, 24-48 hours in the stomach, and in 48-72 hours in the colon (Kraus, Fanning,). Because of the limited manipulation of the gastrointestinal tract during most abdominal

hysterectomies, it is less likely that the bowel is significantly disturbed.

Retroperitoneal dissection increases colonic stasis (Wilson, 2000; Schilder et al., 2002). Radical hysterectomy is usually associated with significant stasis because of the following: (1) Extensive retroperitoneal dissection is required pelvic lymphadenectomy, peri aortic lymph node sampling, ureterolysis, and resection of cardinal ligament. (2) The neuronal pathways to the rectosigmoid are disrupted with resection of the uterosacral ligaments. At the Richmond Hospital (British Columbia, Canada), patients are on a clinical pathway for abdominal hysterectomy and typically receive a clear fluid on postoperative day first, a full fluid diet on postoperative day second and a regular diet on postoperative day third. In October 2006, the gynecologists/obstetricians agreed to shorten the time to start it, aiming to initiate a regular diet within 48 hours of surgery, by eliminating the full fluid diet progression. This practice change was added to the clinical pathway at that time.

Postoperative ileus (POI) is a common and clinically important problem occurring after surgical procedures that may contribute to significant

postoperative morbidity, including delaying enteral nutrition, patient discomfort, prolonging hospitalization, increased postoperative pain, poor wound healing, increased risk of other postoperative complications such as pulmonary complications pneumonia, pulmonary embolism, atelectasis, other nosocomial infections, and increased health care costs (Behm, Stollman, 2003).

Overall incidence estimates that POI typically range from 6% to 10% but can increase to as high as 20% and it occurs in approximately 50% of patients who undergo major abdominal surgery in the United States at 2009. (Bennett et al., 2010) noted that delays in the resolution of POI were responsible for additional morbidity.

The mainstay of traditional treatment for postoperative ileus has included bowel rest, nasogastric tube decompression, intravenous fluids, correction of electrolyte imbalances, close observation, and with holding of nutritional provision postoperatively until resumption of bowel function, as evidenced by passage of flatus or first postoperative bowel motion, which in some cases might not occur for close to a week after surgery. This empirical regimen has been espoused by generations of surgeons, with the belief not only that it hastens recovery from postoperative ileus but that it improves outcomes by reducing the incidence of complications such as infection and anastomotic dehiscence (Department of Surgery at North Shore University Hospital and Long Island Jewish, 2010).

Most of the studies reporting the advantages of multimodal protocols. It focus on either a specific type of operation such as colorectal resections or in cases of general surgery (Kaboli et al., 2003). It has been shown to be effective in reducing the duration of POI. Such protocols involve preoperative illues patient psychological preparation, removal of nasogastric tubes at the end of anesthesia, intra and postoperative epidural analgesia, antiemetic drugs and early postoperative feeding and mobilization, chewing gum, using of non steroidal anti-inflammatory drugs, and laxatives (Richard, Steinbrook, 2005).

Restricted fluid management allows the patient to commence oral fluid intake 2 hours postoperatively. The target fluid intake should be approximately 800 ml. Patients should discontinue I.V. infusions as soon as oral intake is adequate, where by the amount of fluid given orally should be determined by the preoperative weight and not by the CVP.

As stated above, perioperative and postoperative analgesia are essential for the early recovery of patients after major abdominal surgery., analgetic medication paracetamol, non-steroid anti-inflammatory drugs (NSAIDs), etc., patient controlled analgesia (PCA) and systemically local anesthetics .

Ongoing immobilization of the patient in the post operative has multiple disadvantages. The risks of thrombosis, pulmonary complications and insulin resistance are significantly increased, whereas tissue oxygenation and muscle strength are decreased. Impairment of pulmonary function, muscle atrophy and the accompanying orthostatic deregulation initiate a vicious circle that renders the patient bed-bound for an unnecessarily long period. To prevent POI, the previous strategies should be employed (Richard, Steinbrook, 2005; Marce et al., 2007).

General physical nursing care, pre and post operatively, doesn't differ essentially from that involved in any major abdominal surgery. Nursing measures which insure the patients comfort and promote sleep and rest should be employed, and the possibility of post operative complications such as shock and haemorrhage, infection, pneumonia, and obstruction must be always kept in mind. In regard to haemorrhage, the nurse must realize that there is always some possibility of vaginal bleeding, regardless of whether the operation has been done by the abdominal or vaginal rout. Specific nursing care is directed primarily toward the prevention of urinary retention, intestinal distention, and thrombosis - complications which gynecologic patients are especially like to develop is a major nursing responsibility(Eileen, 1950).

2. Subject and method:

Aim of the study:

The study aim is to evaluate the impact of application of multimodal approach on expected clinical outcome for post illues patients after total abdominal hysterectomy through promote wound healing, optimizing patient condition before , during and after surgery, reduce the length of hospital stay for patients with no increase in readmission rates, morbidity or mortality, encourage discontinuation of intravenous fluid, reduced costs, encourage patient satisfaction.

Research Setting:

This study was conducted in the Obstetrics and Gynecology Department at El-Minia General Hospital.

Subjects:

The subjects of the present study were selected as a sampling of forty female patient were recruited into this study divided alternatively and equally into two groups 20 patients in each group I and II (control group (I) was expose to routine hospital care and intervention group (II) was exposed to multimodal applications). The **inclusion criteria** were: Female ages from 21- 60 years, patients undergo total abdominal hysterectomy, willing to participate in the study. Patients undergo abdominal total hysterectomy. **Exclusion criteria** were patients undergoing emergency operations,

patients had chronic disease and patients with restricted movement of lower limbs.

Study tools:

Three tools were used for data collection, namely Physical assessment tool, Analogue scale tool and Multimodal approach tool.

I- Physical assessment, this tool will be developed by the researcher. This tool divided into two parts:

- **The first part**; entails bio-socio-demographic and clinical data as age, marital status, level of education, occupation, indications for surgery, date of operation, date of admission... etc.)
- **The second part**; consists of physical assessment which assesses the following:
 - Pre operative assessment as diagnosis of surgery, fasting duration, last pre operative fluid and food intake, preoperative problems etc...
 - Intra operative assessment as vital signs, duration of operation, type of anesthesia, etc...
 - Post operative assessment as oral fluid and food intake, time of first bowel movement, time of first passage of flatus, etc...

II- Analogue scale:

This tool was adapted from (Campbell, 1995) for pain severity assessment, the numeric pain scale is a 10-point scale. The scale consists of a line divided by numbered points from 0 to 10. Pain scores were as follows: 0 indicates (no pain), less than 3 illustrates (mild) 3-5 indicates (moderate), 5-8 illustrates (sever), more than 8 indicates uncontrollable and worst.

III- Multimodal approach for intervention group:

This sheet based upon several previous studies as (Marce, Junger, 2007) and (Phillips et al., 2001)

- 1) Using of non steroidal anti-inflammatory analgesic drugs (paracetamol orally up to 4 gm daily) if needed.
- 2) Oral fluid intake >800 ml beginning 2 hours postoperative with chloride CHL (water, juice, tea).
- 3) Postoperative nutritional intake beginning not more than 4 hours postoperative with protein-enriched high caloric supplementations until normal diet intake (as yogurt, milk).
- 4) Intravenous fluid administration is continued till adequate fluid intake.
- 5) Mobilization of the patient as early as possible more than two hrs at the first 24 hrs. Classified into independent (without any help), partially independent (with some help) and complete dependent (with complete help like well chair)

Operational study:

Pilot study:

A pilot study was conducted on 10 patients to test clarity, validity, reliability and applicability of the tools

and time consuming. The necessary modifications were done to suit the patient level.

Permission:

Official agreement was obtained to carry out the study in the selected setting. Data collection for this study was carried out in the period from first of September 2011 to the last of February 2012.

The study which was collected from the Department of Obstetrics are divided into two group, intervention group received multimodal approach. Control group received routine hospital care -all patients were treated in the "traditional" way, with feeding only after the resolution of their postoperative illeus. The patients were monitored for vomiting, bowel movements, other complications, and length of hospitalization and using of non steroidal anti-inflammatory analgesic drugs (paracetamol orally up to 4 gm daily) if needed. Physical assessment sheet filled by researcher for study groups.

Ethical consideration:

An official approval was obtained from the head of El Minia General Hospital and Obstetrics and Gynecology Department at General Hospital at El-Minia City to carry out this study. Data was collected by the investigator from the defined study samples through personal interview. **Oral and written consent** were taken from all patients who were participated in the study. **Confidentiality** of obtained data was assured, and the purpose and nature of the study was explained to all participants.

Statistical analysis:

The statistical analysis of data was performed with statistical package SPSS for windows version 18. Results were presented as the frequencies, percentage, mean, comparisons were done using the paired- test. Statistical significance was considered at p-value < 0.05

3. Results:

Table (1) describes socio-demographic characteristics of patients in the intervention and control groups. It shows that (40%) of patients have age range from 30-40 years in the intervention group compared with (35%) of patients in the control group. In relation to marital status, this table revealed that (60%) in the intervention group and (55%) in the control group were married. Regarding occupation, in the intervention group (55%) were housewives compared to (40%) in control group. In relation to educational level, this table presented that (45%) of patients in the intervention group were secondary education compared to (30%) in the control group .

Table (2) Mentioned clinical characteristics for both group. (55%) of patients had general anesthesia in the intervention group compared with (60%) of patients in the control group . As regard to indication of surgery, (50%) in the intervention groups compared with (40%) in control group had cancer/ mass. Women

in both groups had similar mean duration of surgery. 55% of study group had total abdominal hysterectomy while 90% of control group had bilateral hysterectomy.

Table (3) Illustrated comparing with women in the both group about expected out comes, first meal was ingested 1.56 versus 2.20 hours, and mean interval to first bowel sounds, 4.15 versus 3.7 hours. Time to passage of flatus and time to bowel movement were significantly ($p < 0.05$). As regarding paralytic symptoms, including nausea, diarrhea, distention and abdominal cramp, was not significantly different in the two groups studied. While there was statistically significant difference in the nausea ($P < 0.05$). The incidence of postoperative infections, as fever (38°C) in the two intervention groups were statistically significant ($p < 0.05$). Also women in the both groups had similar postoperative complications. The

difference in the length of hospital stay in the two groups had not statistically significant ($p > 0.05$).

Table (4a) Comparison of immediate postoperative outcomes for both group shows that patients ambulated in the intervention group after 2hr was, 60% versus 65% in control groups respectively. There is significant differences between two groups in relation to onset, duration and characters of mobility.

Table (4b) Shows that comparison of postoperative outcomes for both group, the lowest duration of pain or pain persisted (half hr) was in the intervention group, paracetamol was the most analgesia used in the intervention group. Resolution of ilues post operative had the higher percentage of resolution in the intervention group. There were significant differences between two groups in relation to pain intensity and analgesia used.

Table (1): Socio demographic characteristics for both group.

Items	Intervention G (n=20)		Control G (n=20)		P- value & Significance
	No	%	No	%	
Age					
30-40 years	8	40%	7	35%	P>0.05
40-50 years	6	30%	7	35%	
>50 years	6	30%	6	30%	
Marital status					
Single	3	15%	1	5%	P>0.05
Married	12	60%	11	55%	
Widow	4	20%	3	15%	
Divorced	1	5%	5	25%	
Education					
Illiterate	0	0%	2	10%	P>0.05
Read & write	3	15%	3	15%	
Primary	4	20%	0	0%	
Secondary	9	45%	6	30%	
University	4	20%	9	45%	
Occupation					
Employer	9	45%	12	60%	P>0.05
Housewife	11	55%	8	40%	

Table (2): Clinical characteristics of both group.

Items	Intervention G (n=20)		Control G (n=20)		P- value & Significance
	No	%	No	%	
Type of anathesia					
General	11	55	12	60	P>0.05
Regional	9	45	8	40	
Indication for surgery					
Fibroid uterus	4	20	2	10	P>0.05
Cancer mass	10	50	8	40	
Menorrhagia	4	20	7	35	
Endometriosis	2	10	3	15	
Surgical type:					
Total abdominal hysterectomy (TAH)	11	55	2	10	P<0.05
TAH, Bilateral salpingo-oophorectomy (BSO)	6	30	18	90	
TAH, Right salpingo-oophorectomy (RSO)	0	0	0	0	
TAH, Left salpingo-oophorectomy (LSO)	1	5	0	0	
TAH, Bladder neck suspension	2	10	0	0	
Total	20	100	20	100	
Mean duration of surgery(hours)	1.450±0.759		1.440±0.756		p>0.05

Table (3): Comparison of expected outcomes for both group.

Items	Intervention G (n=20)		Control G (n =20)		P- value & Significanc
	No	%	No	%	
Post operative complications:					
• Fever (>38c ⁰)	2	10	5	25	p<0.05
• Shock	2	10	2	10	p >0.05
• Hemorrhage	3	15	2	10	p >0.05
• Thrombophelbitis	3	15	2	10	p >0.05
• Urinary retention	3	15	3	15	p >0.05
• Wound infection	4	20	3	15	p >0.05
• Pneumonia	1	5	2	10	p >0.05
• Constipation	2	10	3	15	p >0.05
• Others	2	10	3	15	p >0.05
Paralytic illeus symptoms:					
• Nausea	3	15	5	25	p <0.05
• Vomiting	3	15	7	35	p <0.05
• Diarrhea	2	10	3	15	p >0.05
• Distension	1	5	2	10	p >0.05
• Abdominal cramp	2	10	3	15	p >0.05
Mean of time intervals:					
• Bowel sound/hr	3.7±1.174		4.15±1.18		p <0.05
• Flatus/hr	3.85±1.14		4.3±1.128		p<0.05
• Bowel movement/hr	3.6±1.14		4.11±1.18		p<0.05
• First meal ingestion/hr	1.5±0.83		2.20±1.11		p <0.05
Mean of length of hospital stay/day	2.55±.887		3.20+.0688		p >0.05

Table (4a): Comparison of immediate postoperative outcomes for both group.

Items	Intervention G (n=20)		Control G (n=20)		P-value & Significance
	No	%	No	%	
Time of post operative I.V line disconnection:					
• 2 hrs	3	15	1	5	P>0.05
• 4 hrs	5	25	6	30	
• 6 hrs	9	45	0	0	
• 8 hrs	3	15	0	0	
• More	0	0	13	65	
Time of first hydration:					
• 2 hrs	18	90	1	5	P<0.05
• 4 hrs	1	5	6	30	
• 6 hrs	0	0	7	35	
• More	1	5	6	30	
First time of ambulation:					
• 2 hrs	12	60	13	65	P<0.05
• 4hrs	7	35	3	15	
• 6 hrs	1	5	1	5	
• 8 hrs	0	0	1	5	
• More	0	0	2	10	
Duration of mobility/day:					
• 3 hrs	16	80	19	95	P<0.05
• 4 hrs	3	15	1	5	
• More	1	5	0	0	
Characters of activities performed:					
• Independent	14	70	12	60	P<0.05
• Partially independent	6	30	4	20	
• Complete dependent	0	0	4	20	

Table (4b): Comparison of postoperative outcomes for both group.

Items	InterventionG (n=20)		Control G (n=20)		p-value& Significance
	No	%	No	%	
Post operative analgesia :					
Paracetamol	19	95	1	5	P<0.05
Other drug	1	5	19	95	
Route of analgesia:					
Oral	20	100	1	5	P<0.05
I.M	0	0	19	95	
Dose of analgesia/mg:					
Less than 100 mg	1	5	16	80	P<0.05
100 mg	17	85	1	5	
200mg	0	0	1	5	
300mg	1	5	0	0	
400 mg	1	5	1	5	
More	0	0	1	5	
Time of analgesia:					
Immediate	14	70	16	80	P<0.05
Half hrs	3	15	3	15	
One hrs	3	15	1	5	
Post operative pain intensity:					
Mild	7	35	2	10	p>0.05
Moderate	8	40	12	60	
Severe	5	25	6	30	
Duration of post operative illeus :					
2 hrs	0	0	1	5	P<0.05
4 hrs	4	20	3	15	
6 hrs	6	30	7	35	
8hrs	4	20	0	0	
More	6	30	9	45	
Resolution of post operative illeus:					
Occur	18	90	14	70	P<0.05
Not occur	2	10	6	30	

4: Discussion:

Dietary management of total abdominal hysterectomy patients has traditionally involved a postoperative progression of clear fluids to full fluids to regular diet. With the change made to eliminate the full fluid step on the clinical pathway for total abdominal hysterectomy (TAH). Both groups tolerated the advancement of the diet from clear fluids to regular diet, with slightly lower number of GI symptoms reported in the early fed group, this is at the same line with the present study by Steed et al. (2002).

MacMillan et al. (2000) assert that taking foods earlier postoperatively may stimulate bowel movements and peristalsis, thereby reducing the incidence of nausea. Early feeding of a regular diet after total abdominal hysterectomy showed no significant difference in most analgesia. Gastrointestinal tolerance and average length of stay were nearly similar between the two groups and there was no significant, but the time of first postoperative bowel movement was sooner in the early fed group. Early postoperative feeding advancement after TAH was well tolerated, and showed no adverse effects in patients Soriano et al., 1996; Flesher et al., 2008.

In the present study there were significance difference in analgesic between two groups, this disagree with the previous study. The time of post operative intestinal movement between the study and control groups was in the same line with the previous study. Lengths of stay in hospital were nearly similar between the two groups but there was no significance differences, this is in agreement with the previous study. The tolerance of an earlier regular diet was observed within this comparative group of 40 patients. Although fifteen percent of study versus twenty five percent, thirty five percent respectively of control group experienced nausea and vomiting postoperatively in the present study. The results demonstrated a similar or slightly better tolerance of a regular diet and first meal ingestion after one and half hrs postoperatively in the early fed group compared with the traditionally fed group, who received full fluids after 2.20 hours. Ninety percent, five percent respectively of study and control group had first hydration there was not significant differences between groups in relation to paralytic symptoms. In the present study intravenous disconnection post operative also had no significant differences in the first two hours between two groups.

The use of multimodal technique offers multiple benefits for the patient and the health care system, this was in line with the goals of modern ambulatory (day-case) surgery. The present study showed that women in the study group had a more rapid return of their bowel function, with a significantly shorter mean postoperative time intervals to bowel sounds (3.7 hours versus 4.15 hours), passage of flatus (4.3 hours versus 3.85 hours). The present finding was similarly with Soriano et al. (1996). They reported that prospective study of 221 patients to assess the gastrointestinal function and patient acceptability of early initiation of oral feeding after caesarean delivery found no significant increase in gastrointestinal morbidity 17.4% versus 15.6%.

In the late 1990s, two prospective randomized trials reported on the safety of early post operative feeding after major gynecologic surgery (Schilder et al., 1997) randomized 96 patients to either early post operative feeding or the traditional postoperative feeding protocol. Although early postoperative feeding resulted in a significant incidence of emesis (approximately 40%), there was no increase in aspiration pneumonia, wound dehiscence, or intestinal leakage. Length of hospital stay was reduced from 4 days to 3 days. Pearl et al. (2002) performed a similar trial of early feeding on 200 patients undergoing major gynecologic surgery and was in the same line with the present study.

Also similar to the trial of Schilder et al. (2002). Pearl et al. (2002) noted a significant incidence of nausea and vomiting (49%) after early feeding. However, early feeding did not result in an increase in aspiration pneumonia, wound dehiscence, or intestinal leakage, and hospital stay was reduced from 6 days to 5 days. Thus data have shown that early feeding after major abdominal gynecologic surgery, although resulting in significant vomiting, does not increase pneumonia, dehiscence, or anastomotic leaks and reduces hospital stay by approximately 1 day. The present study was in the same line with the previous studied but there was no significance differences between two groups in relation to wound infection, pneumonia and hospital stay time or vomiting.

A meta-analysis reported on 130 patients randomized to early enteral versus parenteral postoperative feeding. (Flesher et al., 2008). Class I data from this meta-analysis revealed that early enteral feeding decreased postoperative septic complications. However, the benefit was a decrease in pneumonia and sepsis in patients requiring prolonged intensive care unit hospitalization. There is no evidence-based scientific medicine that has shown a medical benefit of early postoperative feeding after major gynecologic surgery. In a healthy gynecologic patient it is doubtful (class III) that 2 to 3 days without enteral nutrition would result in significant gastrointestinal atrophy to the extent that delayed wound healing or sepsis would occur. The

previous study was nearly in the same line with current the study.

In a prospective non randomized trial, Barnes et al. (2000) evaluated 15 patients after radical hysterectomy. All patients had altered relaxation of the internal sphincter, increased distention needed to trigger relaxation, and decreased rectal sensation. In a prospective nonrandomized trial, Fanning et al. (1995) illustrated that the median clinical return of normal bowel function required 3 weeks after radical hysterectomy. Bowel stimulation after radical hysterectomy, as opposed to awaiting the natural resolution of rectosigmoid stasis after radical hysterectomy, have been reported. In the first trial Fanning and Yu-Brekke.(1999) used 30 ml of milk of magnesia orally 2 times. After return of bowel function, patients were started on a clear liquid diet and were discharged from the hospital 12 hours after tolerating a clear liquid diet. No patients had vomiting, aspiration pneumonia, or ileus. Compared with the previous studies using the traditional postoperative feeding protocol, hospital stay was reduced from 8 to 4 days with aggressive postoperative bowel stimulation. In a second prospective nonrandomized trial 15 - 20 consecutive patients were started on 45 ml of Fleet Phospho-Soda orally and a clear liquid diet on the first postoperative day after radical hysterectomy. Vomiting, aspiration pneumonia, or ileus did not develop in any patients, and hospital stay was reduced to 3.5 days. Both of the studies. Fanning et al., 1995 and Fanning, Yu-Brekke,1999). contained a small number of patients, and therefore further experience needs to be obtained. It is believe that postoperative bowel stimulation may also be of benefit after total abdominal hysterectomy, and therefore the early feeding and hydration be of benefits in the current study.

Postoperative analgesia EPA are essential for the early recovery of patients after major abdominal surgery. Several strategies such as analgetic medication [paracetamol, non-steroid anti-inflammatory drugs etc.). EPA, patient controlled analgesia (PCA) and systemically administered local anesthetics are available. In randomized clinical trials, EPA has been proven to reduce postoperative morbidity and hospital stay and to enhance recovery(Kraus, Fanning, 2000)

A meta-analysis by the Cochrane Institute also showed that EPA significantly reduces the use of systemic opioids, results in effective postoperative analgesia, and reduces or even prevents POI Ballantyne et al., 1998, these results confirmed in a more recent meta analysis. Treatment group receiving EPA alone and in combination with a fast-track program. Although EPA was employed in both groups, patients treated according to the fast track principles recovered earlier, resumed oral food intake sooner and had a shorter hospital stay. The authors concluded that the beneficial effects of a fast-track program are multi factorial and

that improved analgesia post operatively as a result of EPA, in combination with a fast-track protocol, produces a synergistic effect. In our study the lowest duration of pain (half hr) was in the study group, paracetamol analgesics was the most analgesic used in the study group. Analgesic reduce the hospital stay time and post operative complications. Resolution of ilues post operative had higher percentage in the study group than in the control group. Thers is significant diffrences between two groups in relation to pain characters and analgesic uses.

Previous study was shown that immobilization of the patient in the post operative phase has multiple disadvantages. The risks of thrombosis. Jorgensen et al. (2000) pulmonary complications and insulin resistance are significantly increased, whereas tissue oxygenation and muscle strength are decreased(Wilson, 2000). Impairment of pulmonary function, muscle atrophy and the accompanying orthostatic dysregulation initiate a vicious circle that renders the patient bed-bound for an unnecessarily long period. By contrast, early mobilization stimulates intestinal function and, possibly prevent post operative illues POI. Moreover, it enables the patient to perform the activities of daily living independently, thus having, of course, not only a very positive physiological but also a positive psychological effect. Early mobilization can, however, only be achieved with effective analgesia in the postoperative phase (Richard, Steinbrook, 2005) The important of oxygen saturation brought about by early mobilization Kehlet (1997) may secondarily have important clinical implication by reducing post operative wound complications Mynster et al., 1996. In the current study patient mobilization of the study group after two hours was performed and that reducind post operative wound complications. It is our opinion that bowel stimulation may also be of benefit after total abdominal hysterectomy.

Conclusion and recommendation :

It was **concluded** that multimodal approach was benefit for both the patient and the health care system by increasing patient comfort, reducing postoperative complications and decreasing hospital stay. A multimodality approach included early feeding, hydration, mobilization and use of analgesia after major gynecologic surgery results in decreases nausea and vomiting and wound infection, early postoperative diet after major gynecologic surgery, using postoperative bowel stimulation decreases length of hospital stay. The finding illustrate that a multimodal rehabilitation approach result in a major improvement in terms of early resolution of postoperative illeus. Therefore the study **recommended that** more approaches such as chewing gum, antiemetic drugs and laxatives should

be applied to relieve the post operative illues after the total abdominal hysterectomy.

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