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Original Article

Early Feeding After a Total Abdominal Hysterectomy

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Abstract:
Background: Oral fluids and food are traditionally introduced slowly after total abdominal hysterectomy (TAH). This descriptive study examined the effect and tolerance of early oral intake following this surgery. ***Methods:*** A retrospective chart review was conducted on 164 patients who had been on a clinical pathway following TAH. Comparisons in initiation of fluids and foods, and gastrointestinal effects were made between the early fed group (n=82) and the traditionally fed group (n=82)**.** ***Results:*** Both groups had the similar gastrointestinal symptoms postoperatively, but the early fed group had an earlier bowel movement. The early fed group had a statistically significant shorter length of stay. Similar usage of anti-nausea medication and pain medication usage was noted between the two groups, except for a lower usage of Tylenol #3 (acetaminophen with codeine) in the early fed group. ***Conclusions:*** This study found that early feeding could be tolerated well in TAH patients, with statistically significant improvements in usage of some pain medication and length of stay were noted in the early fed group.
Key Words: Early feeding, Diet tolerance, Total abdominal hysterectomy

Introduction:

Traditionally, patients are fed gradually following a total abdominal hysterectomy (TAH), often withholding a regular diet until resolution of the postoperative ileus.[1] Studies that examined early feeding after hysterectomy have shown to be safe and efficacious in this patient population.[2-10] Kraus and Fanning[11] found that early feeding promoted bowel stimulation. Johnson et al.[12] 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 [13]. Generally, studies have found that early feeding is associated with multiple benefits such as reduced length of stay[8] and reduced gastrointestinal morbidity.[2] With surgeries to the bowel, gut motility returns in 4-24 hours in the small intestine, in 24-48 hours in the stomach, and in 48-72 hours in the colon.[11] Because of the limited manipulation of the gastrointestinal tract during most abdominal hysterectomies, it is less likely that the bowel is significantly disturbed.

At the Richmond Hospital, patients are on a clinical pathway for abdominal hysterectomy and typically receive a clear fluid on postoperative day 1, a full fluid diet on postoperative day 2 and a regular diet on postoperative day 3. In October 2006, the gynecologists/obstetricians agreed to shorten the time to start a regular diet, 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. The purpose of this study was to compare the effect and tolerance of the postoperative diet after a hysterectomy between the traditionally fed group (had full fluid diet), and early fed group (no full fluids).

Materials and Methods:

Once ethics approval was granted from the University of British Columbia Clinical Ethics Board and Vancouver Coastal Health Research Institute, a comparative chart review of 164 charts was initiated. A review was made of patients' charts who had received a total abdominal hysterectomy and were on the clinical pathway during the designated time periods. This retrospective chart review looked at the following variables: anthropometrics, surgery performed and reason for surgery, age, and postoperative days of clear fluids, full fluids, and regular diet. Both traditional and early fed groups were compared to determine the differences between the two groups in gastrointestinal tolerance (nausea, vomiting, ileus), amount of pain and anti-nausea medication used and time to first bowel movement. The average length of stay was also compared between both groups.

Means and ranges were compared for all of the data collected in this descriptive study. The information recorded was non-specific to individual patients, and no identifiable information (name or personal health number) was retained. Data to be collected from the early fed group (n=82) and comparative traditionally fed group (n=82) was analyzed using the Student t test for statistical significance. The sample size chosen used alpha=0.05, 80% power (for 2-sided significance) based on information obtained from Pearl et al.[3], Ghosh et al.[4], and MacMillan et al.[7]

Results:

One hundred and sixty four charts were reviewed retrospectively on patients who had received a total abdominal hysterectomy. The 82 traditionally fed group comprised patients who had surgery performed before October 2006. The 82 patients from the early fed group had surgeries performed after January 2007. Both groups were similar in their BMI, age, reason for surgery and type of surgery performed (Table 1).

Table 1: Characteristics of the study groups		
Characteristic	**Traditionally fed group (n = 82)**	**Early fed group (n = 82)**
Age	50.1 ± 7.9 years	48.3 ± 8.1 years
Body Mass Index (kg/m²)	25.1 ± 5.2	26.0 ± 4.5
Diagnosis:		
Fibroid uterus	37 (45%)	40 (49%)
Cancer or mass	18 (22%)	13 (16%)
Menorrhagia	12 (15%)	16 (20%)
Endometriosis	7 (9%)	5 (6%)
Cyst	6 (7%)	5 (6%)
Other	2 (2%)	3 (3%)
Surgery performed:		
Total Abdominal Hysterectomy (TAH)	42 (51%)	41 (50%)
TAH, Bilateral salpingo-oophorectomy (BSO)	31 (38%)	33 (40%)
TAH, Left salpingo-oophorectomy (LSO)	5 (6%)	6 (7%)
TAH, Bladder neck suspension	3 (4%)	1 (1%)
TAH, Right salpingo-oophorectomy (RSO)	1 (1%)	1 (1%)

Information was collected on the use of pain medications and anti-nausea medications between the two groups. Use of the medication was compared using the Student t test for patient-controlled analgesic (PCA), Ibuprofen, Tylenol #3 (acetaminophen with codeine), plain Tylenol, Demerol, Gravol and Maxeran (Table 2). Each medication was compared with the F-test to determine if should use equal variance or unequal variance, and then the traditional group was compared with the early feeding group for significant difference using the Student t-test.

Table 2: Medication Usage Between Traditional Group Versus the Early Feeding Group			
Medication	**Traditionally fed group** (n = 82, p = 0.05) Mean Usage	**Early fed group** (n = 82, p = 0.05) Mean Usage	**Statistical Significance** (using Student t-test)
Patient Controlled Analgesia (PCA) (mg)	17.0 mg	18.3 mg	No significant difference
Ibuprofen (200 mg tabs)	3.6 tabs	4.1 tabs	No significant difference
Tylenol #3 (30 mg)	3.9 tabs	2.3 tabs	Significant difference
Tylenol plain (325 mg)	7.7 tabs	8.6 tabs	No significant difference
Demerol (50 mg)	0.21 tabs	0.06 tabs	No significant difference
Gravol (50 mg)	45 mg	50 mg	No significant difference
Maxeran (10 mg)	3.7 mg	2.6 mg	No significant difference

Average length of stay and time to first bowel movement were also compared to see if any significant difference was found between the traditional and early fed groups using means and averages. The number of patients in the traditional group had more gastrointestinal (GI) symptoms than the early fed group. More patients had a bowel movement prior to discharge in the early fed group (52% versus 45% in the traditionally fed group). Ileus was present in 5 patients in the traditionally fed group, while 1 patient was reported to have an ileus in the early fed group.

Nausea and vomiting was reported in 48% (traditionally fed group) and 37% (early fed group). Because the dietary adjustment occurred on the second day post-operatively (traditionally fed group received a full fluid diet while the early feeding group received a regular diet), GI symptoms were evaluated on that day in particular. The number of patients having GI symptoms (ileus, nausea, vomiting) in the traditionally fed group was higher (7% of patients) versus the early feeding group (2% of the patients). The average number of days to first bowel movement postoperatively occurred 1.65 days sooner in the early fed group than the traditionally fed group, which may have impacted the other GI symptoms like ileus, nausea, and vomiting.

Length of stay was also evaluated in this retrospective chart review. The mean length of stay for the traditionally fed group was 4.30 days and for the early fed group was 4.01 days. Comparing these two averages using the F-test and Student t-test for unequal variance demonstrated a significant difference between the two groups.

Discussion:

Dietary management of total abdominal hysterectomy patients has traditionally involved a postoperative progression of clear fluids to full fluids to regular diet at the Richmond Hospital. With the change made to eliminate the full fluid step on the clinical pathway for TAH, the tolerance of an earlier regular diet was observed within this comparative group of 164 patients. Although 37-48% of patients experienced nausea and vomiting postoperatively in this study, the majority of it was experienced in the first 24 hours of surgery. The results demonstrated a similar or slightly better tolerance of a regular diet on the second day postoperatively in the early fed group compared with the traditionally fed group, who received full fluids.

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. McMillan, Kammerer-Doak, Rogers, and Parker [7] 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 analgesic and anti-nausea medication, except in the lower usage of Tylenol #3 in the early fed group, which showed a statistically significant difference between the two groups. Gastrointestinal tolerance and average length of stay were similar between the two groups, but the time of first postoperative bowel movement was sooner in the early fed group, impacting pain and anti-nausea medication usage. Early postoperative feeding advancement after TAH was well tolerated, and showed no adverse effects in patients placed on the current clinical pathway.

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