A Comparison of Safety and Efficacy of Early and Delayed Oral Feeding after Abdominal Hysterectomy

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مقایسه بی خطری و مؤثر بودن تغذیه زودرس پس از عمل
هیستراتکومی شکمی

خلاصه:
هدف:
پس از عمل تغذیه خوراکی زودرس، کاملاً از دست دادن زودگی در بهبودی نسبی زخم و وضعیت روحی بیمار تاثیر داشته و دریافت می‌شود لذا شروع زودگیهای زود‌زده می‌باشد. این در اثر مورد توجه قرار گرفته و هدف این پژوهش ارائه‌ی این مطالعه کمی وسیعی برای منظوره بودن تغذیه زودرس خوراکی در مقایسه با شروع تغذیه تأخیری در بیمارانی که تحت عمل جراحی هیستراتکومی شکمی قرار می‌گرفت، مورد بررسی قرار گرفته است.

مواد و روش:
این پژوهش منطقه‌ای تصادفی بر روی 50 بیماری که تحت عمل هیستراتکومی شکمی قرار گرفتند در مرکز صحت رضوانی تربیت و دانشگاه علوم پزشکی مشهد انجام گرفته است.

بیماران به صورت تصادفی در دو گروه با شروع زودگیهای زودرس و شروع تأخیری تقسیم شدند. گروه اول در معرض 8 ساعت پس از عمل زودگیهای زودرس و گروه دوم در معرض 8-24 ساعت انتهایی زودگیهای زودرس دریافت کردند و برای دو گروه زندگی مادی صاف شروع و در طی روزهای نوزدهم دو خوراک نیوایی و قابل تغییر و پذیرایی مصرف شد.

نتایج:
تعادل بیماران در 48 ساعت پس از عمل نشان داد. نتایج نشان داد که بیمارانی که در معرض زودگیهای زودرس و 8 ساعت پس از عمل جراحی مورد وضوح قرار گرفته، بیمارانی که در معرض زودگیهای تأخیری مورد توصیه قرار گرفتهند در نتیجه بهترین عملکرد داشته‌اند.

نتیجه‌گیری:
نتیجه‌گیری: تغذیه زودرس و پس از عمل جراحی هیستراتکومی شکمی تأثیراتی را در بیماران دارد که می‌تواند نتایج بهتری را داشته باشد.

کلمات کلیدی:
تغذیه پس از عمل، تغذیه خوراکی زودرس، هیستراتکومی شکمی، تغذیه.
Introduction:
Recently, the need to delay postoperative feeding has been questioned in the literature [1, 2, 3, 4]. Early enteral feeding has been associated with reduced protein-energy stores depletion, improved wound healing, and a positive psychological impact, resulting in faster recovery [5, 6, 7]. Early oral feeding has been reported to be safe in patients undergoing Laparoscopic surgery or Laparotomy, gastrointestinal and colorectal surgery, and may shorten hospital stay and reducing the cost [1, 5, 6, 7, 8]. Historically, patients have been maintained NPO "Nothing by mouth" following abdominal surgery until bowel sounds have returned or flatus has been passed. Then a clear liquid diet is given for at least one day, followed by a full liquid diet for at least one day. The results of this method indicate an increase in hospital stay and seems to have no advantage [7, 9, 10].

There is now evidence to show that early feeding following abdominal surgery, particularly in hysterectomy, does not increase the incidence of gastrointestinal symptoms [1, 2, 3, 7, 9], and that it can actually reduce morbidity and length of stay in hospital [8, 9]. In recent years many publications have assessed the benefits of early feeding following surgery [4, 5, 8, 9]. On the basis of this evidence, the aim of our study was to prospectively assess the safety and tolerability of early oral feeding after hysterectomy.

Materials and Methods:
This was a prospective randomized study of 80 women who were undergoing abdominal hysterectomy. They were enrolled in a randomized controlled trial compared with delayed postoperative oral feeding in the Gynecologic Department of Imam Reza Hospital from September 2001 to November 2002. Subjects were excluded if they had history of bowel disease, surgery, or any medical condition that could influence feeding. The anesthetic methods, antibiotic prophylaxis medication, postoperative analgesia and antiemetic management of the study patients were standardized and similar. Intraoperative nasogastric tube was not used, and the patients were mobilized on the first postoperative day. A variety of demographic and clinical indices were recorded.

All surgical procedures were performed by staff or by residents under staff's direct supervision. The technique of surgery was similar particularly fannenstedt incision which was made in all cases. The vaginal apex was opened and the parietal and visceral peritoneum were sutured.

After surgery the patients were randomized into groups; early oral feeding was delayed. Patients in the early feeding (group 1) received oral diet 6-8 hours after surgery, but those in the delayed feeding group (group 2) were not given anything by mouth for up to 18-24 hours. and they advanced to clear liquids on day 1 and a regular diet on day 2 if they reported passage of flatus or stool. All patients were examined at least twice daily and were monitored for the ability to retain oral fluids, nausea and vomiting, bowel movements, nasogastric tube requirement, time of regular diet consumption, complications, and length of hospitalization. Nasogastric tube was inserted if two or more episodes of vomiting of more than 100 mL occurred in the absence of bowel movement. Ileus was considered resolved after a bowel movement in the absence of abdominal distention or vomiting.

Statistical comparisons were made using students T test, x2 test of association, and multivariate analysis where appropriate. Significance was set at P<.05. SPASS 9.0 (SPASS Inc., Chicago,IL) was used for all statistical comparisons.

Results:
Eighty patients were enrolled in this study. Forty patients were assigned to each dietary regimen. There were no significant demographic and surgical information differences between groups (Table 1). Data are presented as mean ± standard deviation, or (N %). No significant differences among groups. In early-fed patients nausea developed more. The incidence of vomiting, abdominal distention, length of postoperative ileus, nasogastric tube requirement were comparable in both groups. Time to development of bowel
Table 1. Patient and surgical information in early and delayed oral feeding after abdominal hysterectomy in Imam Reza Hospital, Mashhad (Sept. 2001-Nov. 2002)

<table>
<thead>
<tr>
<th>Category</th>
<th>Early Feeding Group (N=40)</th>
<th>Delayed Feeding Group (N=40)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (y)</td>
<td>46.5 ± 6.2</td>
<td>47.5 ± 6.4</td>
</tr>
<tr>
<td>Disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myomata</td>
<td>22 (55%)</td>
<td>25 (62.5%)</td>
</tr>
<tr>
<td>AUB</td>
<td>13 (32.5%)</td>
<td>12 (30%)</td>
</tr>
<tr>
<td>Chronic PID</td>
<td>5 (12.5%)</td>
<td>3 (7.5%)</td>
</tr>
<tr>
<td>Duration of the surgery (h)</td>
<td>2.1 ± 1</td>
<td>2.5 ± 1.3</td>
</tr>
</tbody>
</table>

 sounds, time for regular diets and hospital stay were significantly sooner in the early feeding group (Table 2).

Discussion:
It has been shown recently that immediate resumption of oral intake may be well tolerated after laparotomy, cesarean delivery and colorectal resection [10, 11, 12]. Early feeding has been advocated for its nutritional value and for its positive effect on the gastrointestinal tract and for its shorter hospital stay and reduced cost [13, 14, 15, 16, 17]. Furthermore, most prospectively randomized studies for severe abdominal and thoracic trauma demonstrated significant reduction in infectious complication for patient given early enteral nutrition when compared with those who were unfed or received parental nutrition [18]. Our study confirmed that early oral feeding in patients after abdominal hysterectomy is safe and efficacious. The incidence of postoperative vomiting and abdominal distention were comparable in both groups. Similar results have been reported in patients undergoing elective ileal or colonic resection and cesarean [1,11, 13, 17]. Despite this nausea was more developed. L.M. Susan et al showed more nausea in the delayed feeding group in their study [6]. We found that patients in the early feeding group tolerated both clear liquid and regular diets 1/5 days sooner than those in delayed feeding group. In our study, 83% patients in early feeding tolerated ignition and advancement of their diet on the first attempt. Similar results have been reported in patients undergoing elective colorectal surgery or cesarean section, 79-86% of whom tolerated early feeding on the first attempt [5, 8, 19].

In this study, length of hospital stay was reduced for early feeding group. Similarly, comparable results have been reported by several authors [1,9,15,17, 19,20]; a number of studies did not find any significant difference in length of hospitalization [4, 13].

Conclusion:
Women undergoing hysterectomy are usually healthy and have normal gastrointestinal function and their bowel function generally returns rapidly following surgery. Thus, early oral feeding after hysterectomy is safe and can be tolerated by the majority of the patients.

Table 2. Gastrointestinal information in early and delayed oral feeding after abdominal hysterectomy in Imam Reza Hospital, Mashhad (Sept. 2001-Nov. 2002)

<table>
<thead>
<tr>
<th>Category</th>
<th>Early Feeding Group (N=40)</th>
<th>Delayed Feeding Group (N=40)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nausea</td>
<td>17 (42.5%)</td>
<td>9 (22.5%)</td>
<td>0.006</td>
</tr>
<tr>
<td>Vomiting</td>
<td>5 (12.5%)</td>
<td>4 (10%)</td>
<td>NS</td>
</tr>
<tr>
<td>Abdominal Distention</td>
<td>10</td>
<td>9 (22.5%)</td>
<td>NS</td>
</tr>
<tr>
<td>Nasogastric Tube Use</td>
<td>0</td>
<td>0</td>
<td>NS</td>
</tr>
<tr>
<td>Time to development of bowel sounds (d)</td>
<td>1.7 ± 1.1</td>
<td>2.2 ± 1.1</td>
<td>0.007</td>
</tr>
<tr>
<td>Time to initiation of solid diet (d)</td>
<td>1.8 ± 1.2</td>
<td>2.2 ± 1.4</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Hospital Stay (d)</td>
<td>2.3 ± 1</td>
<td>3.2 ± 1.5</td>
<td>&lt;0.003</td>
</tr>
</tbody>
</table>

NS = Not Significant
Abstract:

Background:
Postoperatively, early enteral feeding has been associated with reduced protein-store depletion, improved wound healing, and a positive psychological impact, resulting in faster recovery. Thus, early oral feeding after abdominal surgery has been the goal of surgeons for several decades.

Objective:
To evaluate the safety and efficacy of early oral feeding as compared with those placed on a delayed feeding schedule in patients undergoing abdominal hysterectomy.

Material and Methods: This was a prospective randomized study of 80 women who were undergoing abdominal hysterectomy. They were enrolled in a randomized controlled trial and compared with delayed postoperative oral feeding. Women were divided in two groups. Patients in the early feeding group received oral diet within 6-8 hours of surgery, but those in the control group were given nothing by mouth for 18-24 hours. They were given clear liquids, and were advanced to solid food on the second or third postoperative day. We reviewed the gastrointestinal outcomes and hospital stays.

Results:
Eighty women were studied, with assigned 40 versus 40 to each group. Two groups were similar in age, disease and surgical length. In early-fed patients nausea was more developed (43% versus 22.4%, p=0.006). Despite this, vomiting, abdominal distention, length of post operative ileus, need of nasogastric tube use were comparable in both groups. Time to development of bowel sound (1.7±1.1 days vs 2.2±1.1 days, p=0.007), time to initiation of solid diet (1.8±1.2 days vs. 2.9±1.4 days, p<0.0001) and hospital stay (2.3±1 days vs. 3.9±1.3 days, p<0.003) were significantly sooner in the early feeding group.

Conclusions:
Early postoperative feeding in abdominal hysterectomy seems to be safe, well tolerated, and may lead to earlier hospital discharge. Key Words: Postoperative Feeding, Early Oral Feeding, Abdominal Hysterectomy, Nutrition.

Acknowledgment:
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References:


