Original Article

Current perioperative management of elective colorectal resections in Ireland: When is the ideal time to introduce feeding post operatively?

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ABSTRACT

Objective: To observe the response of General and colorectal surgeons of Ireland regarding fast track surgery.

Methods: A questionnaire was mailed to general and colorectal consultant surgeons in all the public hospitals in Ireland. Questions were asked regarding elective colorectal resections and routine use of nasogastric tubes, duration of feeding tube left in situ, whether artificial feeding tube is used like total parenteral nutrition (TPN) or enteral etc.

Results: The overall response rate was 43%. Forty four percent of consultants have the practice of using nasogastric tube with average duration of 24 to 48 hours. The majority of consultants did not use artificial feeding and majority of them started oral feeding on 2nd or 3rd post operative day. Various different criteria were seen regarding determination of timing of oral or enteral feeding after elective colorectal resection.
Conclusion: Fast track surgery has not yet become common in Ireland but there is a move towards incorporating its basic principles into every day practice. (Rawal Med J 2008;33:81-84).

Key Words: Colorectal, postoperative feeding, fast track surgery.

INTRODUCTION

One of the most striking changes in surgical practice in recent years has been the move towards “fast track surgery” or “multimodal rehabilitation”. The basic components of this new approach to perioperative management including use of epidural anesthesia, early enteral nutrition, early post operative mobilization, avoidance of drains and nasogastric (NG) tubes. Several randomized controlled trials have demonstrated the safety of early feeding after open and laparoscopic colorectal surgery. Introducing a “Fast Track” program requires a multidisciplinary approach. Protocols must be devised and implemented among a range of hospital staff including surgeons, anesthetists, nursing staff, dieticians and physiotherapists. The patient’s comprehension and acceptance of these protocols, which deviate from his/her expectations of usual postoperative care is also crucial to the success of the plan.

There is a wide variation in surgical practice within Europe. Danish centers are the most enthusiastic practitioners of multimodal rehabilitation whereas Scottish and Dutch centers are more conservative in introducing fluids and food post operatively. We aimed to study the current practice in Ireland by surveying general and colorectal surgeons across Ireland to find out whether surgeons in Ireland are embracing the new theories of post operative care as practiced in the Scandinavian countries.
METHODS

A questionnaire was mailed to the general and colorectal consultant surgeons in all the public hospitals in Ireland. They were asked to describe their typical management of an elective colorectal resection case. The survey included questions regarding routine use of NG tubes, the duration the feeding tube was left in situ, whether artificial feeding is used and if so which method e.g. TPN, Enteral. We also included questions on time of commencing feeding and the criteria that were used to determine when feeding should be commenced.

RESULTS

The response rate was 43%. NG tube was not used in 56% patients. The routine use of nasogastric tubes was continued by 44%, and the average duration is for 24 to 48 hours (Fig 1). The majority (63%) did not use artificial feeding post operatively. Of those who did, enteral feeding via an NG tube was the most popular method (Fig 2). The majority of surgeons commence feeding at 24 to 48 hours post operatively. Most introduced oral feeding on post operative day 2 to 3 (58%). However 23% chose to introduce oral feeding on the first post operative day (Fig 3).

Fig 1. Length of use of NG tube
The criteria used to determine the timing of oral or enteral feeding was almost evenly split. 32% made the decision on an empirical basis (Fig 4). Other factors were audible bowel sounds (29%), passing flatus (25%) and a bowel motion.

**Fig 2. Methods of feeding**

The reintroduction of feeding was delayed in cases of inflammatory bowel disease and surgery for intestinal obstruction. Procedures involving a more distal resection such as low anterior resection were also cited as cause for delaying feeding. 34% also altered their feeding protocol in cases where a defunctioning colostomy was used, introducing earlier feeding.

**DISCUSSION**

Kehlet and Holte reported an incidence post operative ileus of only 5% after the adoption of their multimodal approach. Routine use of NGT in patients who have undergone elective colorectal surgery has not been reported beneficial. The small bowel regains normal function 4 to 8 hours after laparotomy and can absorb food within 24 hours.
Stomach function returns within 24 to 48 hours and colon takes longest to recover at up to 72 hours. Many randomized controlled trials have demonstrated that enteral feeding within 24 hours of gastrointestinal surgery is tolerated and does not result in increased rates of anastomotic dehiscence or infection.

**Fig 3. Start oral feeding**

![Graph showing start oral feeding timeline](image)

The post operative catabolic response which is exacerbated by starving the patient perioperatively results in loss of lean body mass, fatigue and prolonged post operative morbidity and early enteral feeding may be associated with reduced rates of wound infection, pneumonia, intraabdominal abscesses and wound dehiscence. Post operative bed rest encourages muscle atrophy, impaired tissue oxygenation and increased risk of venous thrombembolic complications.
Surveys in the Europe have shown that under-nutrition is common and under recognized among the hospital population,\textsuperscript{14} and 10\% of patients with chronic diseases such as cancer, gastrointestinal disease and respiratory disease have BMI < 20 m/kg\textsuperscript{2}.\textsuperscript{15} Malnutrition in hospitalized patients is generally associated with increasing morbidity and mortality, it is yet a widely unknown problem in hospitals.\textsuperscript{12} It is clear that the Irish practice is closer to Scotland than the Scandinavian countries. The majority of surgeons in Ireland avoid routine use of NG tubes and of those who do the average duration of use is 24 to 48 hours. In Norway and Sweden over 60\% of centers remove the NG tube within 24 hours.

Fast Track Surgery has not yet become commonplace in Ireland but this survey shows that there is a move towards incorporating its basic principles into everyday practice. Fast track rehabilitation suffer from less pain, shorter hospital stay and have a faster return of gastrointestinal function in the post operative course.\textsuperscript{15} In addition to the demonstrated
health benefits to patients, early feeding was safe, well-tolerated and reduced postoperative morbidity.\textsuperscript{16} A reduction in median length of hospital stay following elective hemicolecotomies from 7 days to 3 days has been reported.\textsuperscript{17} In conclusion, Fast Track Surgery has not yet become commonplace in Ireland but this survey shows that there is a move towards incorporating its basic principles into everyday practice. It is likely that increasing pressure on healthcare budgets will play a role in determining the widespread adoption of fast track approach in the coming years.

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**REFERENCES**


