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REVIEW

The benefits of enhanced recovery after surgery

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Summary Enhanced recovery programs (ERP) after surgery are now being increasingly applied in daily practice. The purpose of this article is to review specific aspects and advantages of this approach. Beyond the reduction in overall morbidity (found for multiple surgical specialties), ERP include issues and stakes that affect patient care, the care team and society in general. Data from the literature are in agreement, emphasizing that, in this clinical pathway, the patient has thus become an actor in his own care, whose active participation is paramount to the success of the program. In parallel with this, a spirit of teamwork is required and the program contributes substantially to cohesion within the team. Finally, all studies show that ERP have a beneficial effect in economic terms for society.

Introduction

Enhanced recovery programs (ERP) after surgery consist of a set of pre-, intra-, and postoperative measures to reduce the traumatic effects of surgery. This new approach has caused a revolution in surgical care [1]. It was originally developed for colorectal surgery, but its use has been extended to all surgical specialties whether gastrointestinal such as colorectal, hepatic, pancreatic, esophago-gastric, or orthopedic, gynecologic, thoracic, vascular, etc. [2]. The advantages of this new approach concern the patient, the care team and society as a whole.

Issues for the patient

All level 1 evidence-based medicine studies have showed that ERP reduced postoperative complications by almost 50% [3,4]. This reduction in morbidity is most marked for ''medical'' complications. But aside from this objective and easily measurable effect,

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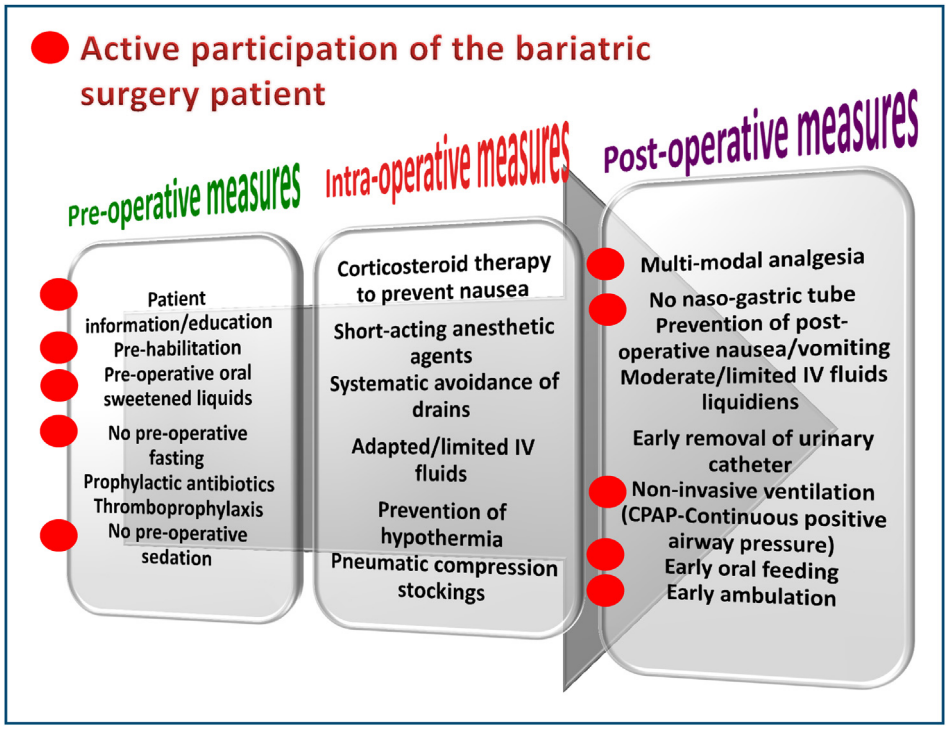

Figure 1. An example of an improved rehabilitation program in bariatric surgery. The bullet points indicate items where patient participation can be effective.

patients also experience an improvement in their quality of life [5]. Patients have less pain, ileus, and postoperative fatigue. This results in a significantly shortened hospital stay and recovery, with no significant increase in re-admission rates.

The main feature (and innovation) in ERP, in contrast to conventional surgical approaches, is to consider the patient as a key player in his or her own care. The patient's role is absolutely critical to the success of this management approach. Patient participation begins at the first preoperative medical consultation and continues during postoperative hospitalization, and even beyond the hospital stay [6,7]. A recent British study showed that active patient participation was, by itself, a meaningful factor in reducing the duration of hospitalization [8]. For digestive surgery (such as colorectal surgery or bariatric surgery), the patient's active participation is implicit in nearly half of the pre- and postoperative rehabilitation protocol components (Fig. 1). In order to guarantee patient involvement in care, we recommend that each patient be provided with and fill out a daily logbook (Table 1). Based on the Law of 4 March 2002 in France, the High Authority for Health (HAS) has also made ''the active involvement of the patient in his care'' a major theme of quality of care [9].

In this context, early mobilization, which requires the patient's active participation, is essential. The patient is transformed from a ''passive state in a horizontal position'' to a ''vertical active state'', especially since active mobilization has been shown in large studies to be a major independent factor for success of any ERP [10]. But early mobilization requires effective implementation of other rehabilitation measures. A patient who has been fully informed and educated prior to surgery, who is free of pain and nausea, who has no tubes and no serious complications will more willingly agree to get up off the mattress.

Issues for caregivers

ERP can be conceived as a multimodal and therefore a multidisciplinary approach. A review of the various management

Table 1 Summary of a daily journal furnished to the patient undergoing digestive surgery.

Question	Responses
Prior to surgery	
I thoroughly understand the proposed management of care	Yes/No
I was able to drink sweet liquids the night before surgery	Yes/No
The day of surgery	
I drank water	Enough/Very little/Not at all
I ate	Well (the entire tray that was offered)/Little/Not at all
I sat up	Length of time...
I stood	Length of time...
I walked	Length of time...
I had nausea (or I vomited)	Scale from 1 to 10
I had pain	Scale from 1 to 10

The same postoperative items are repeated each day during the hospitalization. The daily journal can be adapted to each specialty depending on the pertinence of the various items. A sample of the detailed journal can be downloaded from the site http://www.grace-asso.fr/.