



Postoperative nausea and vomiting in the post-anesthetic care unit, a 5-year survey of a quality assurance program in surgical cancer patients

Cyrus Motamed, Jean-Louis Bourgain

Received 26 February 2015

Accepted 5 March 2015

Available online: 14 April 2015

Institut Gustave-Roussy, departement of anesthesia, 38, rue Camille-Desmoulins, 94805 Villejuif cedex, France

Correspondence:

Cyrus Motamed, Institut Gustave-Roussy, departement of anesthesia, 38, rue Camille-Desmoulins, 94805 Villejuif cedex, France.
motamed@igr.fr

Nausées et vomissements post-opératoires en salle de surveillance post-interventionnelle, 5 ans de suivi d'un programme d'assurance qualité chez les patients opérés de cancer

Keywords

Quality assurance
anesthesia
PONV
AIMS
Cancer surgery

Summary

Introduction > PostOperative Nausea and Vomiting (PONV) is a major side effect related to surgery and anesthesia. Our institution is equipped with Anesthesia Information Management System (AIMS). We used this database to assess and follow the effect of our quality assurance program for PONV.

Methods > Our AIMS system permits automatic storage of vital signs while other information are indexed by anesthesia providers and PACU personnel. Intra-operative and PACU events were extracted from a database by sequential query language (SQL) interrogation from year 2005 to 2010. A new prophylactic antiemetic protocol was issued for high-risk patients in our institution (dexamethasone, droperidol in the operating room and ondansetron in the PACU) and initiated in 2006; in parallel, adjuvant measures influencing PONV were taken for anesthetic interventions. PONV scores and related medications, intra- and postoperative opioids and inhalational anesthetics consumption were extracted, and results were regularly shared with anesthesia providers and PACU personnel as part of quality assurance program.

Results > The study concerned 40,045 patients, exhaustivity or completeness was 70% in 2005 but reached 90% in 2010. PONV scores significantly improved during the years after the instauration of the new protocol (31% in 2005 vs. 13% in 2010). Concomitantly, morphine consumption and intra-operative nitrous oxide showed a steady decrease. No significant difference was noticed in the use of inhalational anesthetics.

Mots clés

Assurance qualité en anesthésie
NVPO (nausées vomissements postopératoires)
Base de données informatiques en anesthésie
Chirurgie pour cancer

Introduction

PostOperative Nausea and Vomiting (PONV) is one of the major adverse events in anesthesia and surgery with an average incidence of 30% for vomiting and 50% for nausea [1,2].

However, the incidence could be higher in a certain category of patients such as women, history of PONV or motion sickness, younger age, a non-smoking history, peri-operative opioids, volatile anesthetic, nitrous oxide or patients having thyroid or gynecological surgery [3–5]. PONV can also prolong PACU stay and even cancel ambulatory surgery [6]. Symptoms appear mostly within hours of surgery and decrease over days; multiple guidelines are issued [7], and according to these guidelines, it is not cost-effective to prevent PONV for all patients and it is recommended to perform this strategy only for patients being at high and moderate risk [7,8]. As part of an assurance quality program, this single center study was designed to assess the incidence of PONV and the follow-up of a related quality assurance program in PACU in surgical cancer patients. Surgical cancer patients might have different profile as regards PONV because of different environment, such as chemotherapy or other cancer related drugs. There are hundreds of studies about PONV, but most of them concern comparison of different protocols in a limited group of patients or the effect of single medication or other medical intervention. This study was done to assess the overall effect of multiple interventions in all of our patients by interrogating an electronic database.

Methods

The following adult surgeries are performed in our cancer hospital: general, gynecological, otorhinolaryngology, related reconstructive/plastic surgery, interventional radiology, and superficial procedure, including central venous access implantation under general anesthesia for a few number of children (400 per year) with an average number of 7000 surgical patients per year.

Conclusion > Using our AIMS database, we indirectly monitored the effectiveness of our PONV protocol but also other possible component of a multimodal approach toward these side effects.

The local ethical committee of our hospital agreed for data extraction from our database and permitted the use of extracted data for quality assurance assessment and possible further publication.

Our anesthesia department was equipped with an Anesthesia Information Management System (AIMS) with extractable data through the software (Archive Browser®) from 2001. The system was integrated to ADU 5/S Dragger® anesthesia machine, which automatically stores vital physiologic parameters while anesthesia providers index manually all other interventions, such as anesthetic drug administration, but also other events, such as the start of anesthesia, duration of surgery, temperature, PONV and pain scores. The system saves files in an individual based procedure in PDF format but global data are extractable by quality management administrators through a database using SQL interrogation.

In a first step, based on literature, we assessed risk factor for PONV in a population of 1197 consecutive surgical patients of our hospital. We found that 70% of PONV occurred during the first 2 h post-surgery, while the other 30% occurred in the ward during the next 22 hours. The risk factors were found to be respectively, age, gender, neck surgery, and a history of PONV. A PONV score was established with these risk factors (*appendix A*). The score was therefore electronically calculated during the anesthesia consultation. The prophylactic treatment was started with droperidol 1.25 mg IV administered 30 min before the end of surgery if the score was between 38 and 60. If the calculated score was above 60, dexamethasone 8 mg IV was administered before incision, in addition to droperidol. Ondansetron 4 mg IV was administered in the PACU or in a conscious patient if symptoms persisted. This protocol was started in 2006.

In addition, as part of a multimodal approach, we extracted information on other related anesthetic interventions potentially interacting with PONV, which were respectively intra- and postoperative opioids consumption, Total Intra-Venous Anesthesia (TIVA) with propofol and inhalational agents.

Download English Version:

<https://daneshyari.com/en/article/6189933>

Download Persian Version:

<https://daneshyari.com/article/6189933>

[Daneshyari.com](https://daneshyari.com)