Postdischarge Nausea and Vomiting: Management Strategies and Outcomes Over 7 Days

Jan Odom-Forren, PhD, RN, CPAN, FAAN, Vallire Hooper, PhD, RN, CPAN, FAAN, Debra K. Moser, DNSc, RN, FAAN, Lynne A. Hall, DrPH, RN, Terry A. Lennie, PhD, RN, FAAN, Joseph Holtman, PhD, MD, Melissa Thomas, BSN, RN, Zohn Centimole, APRN, CRNA, MS, Carrell Rush, MPH, Christian C. Apfel, PhD, MD

Purpose: *The purpose of this study is to determine patient management strategies and outcomes for self-care of postdischarge nausea and vomiting (PDNV).*
Design: *Prospective, comparative, descriptive, and longitudinal study.*
Methods: *The sample consisted of 248 patients aged 18 years or older undergoing a procedure requiring general anesthesia. Patients recorded incidence and severity of nausea and vomiting, the impact of symptoms, and actions taken to alleviate symptoms for 7 days postdischarge.*
Findings: *The prevalence of PDNV was 56.9%. The methods used to relieve symptoms included antiemetic use by a minority and nonpharmacologic techniques of self-management by some. The effect of nausea on QOL, patient functioning, and patient satisfaction was significantly worse for those who experienced postdischarge nausea on all days.*
Conclusion: *Patients with PDNV use minor self-care strategies to manage symptoms. The presence of PDNV affects overall quality of life, patient functioning, and patient satisfaction.*

Keywords: *postdischarge nausea and vomiting, outpatient surgery, quality of life, ambulatory surgery, day surgery.*

Jan Odom-Forren, PhD, RN, CPAN, FAAN, is an Assistant Professor, College of Nursing, University of Kentucky, Lexington, KY; Vallire Hooper, PhD, RN, CPAN, FAAN, is a Manager, Nursing Research, Mission Hospital, Asheville, NC; Debra K. Moser, DNSc, RN, FAAN, is a Professor, College of Nursing, University of Kentucky, Lexington, KY; Lynne A. Hall, DrPH, RN, is an Associate Dean of Research, School of Nursing, University of Louisville, Louisville, KY; Terry A. Lennie, PhD, RN, FAAN, is a Professor, Associate Dean for PhD Studies, College of Nursing, University of Kentucky, Lexington, KY; Joseph Holtman, PhD, MD, is a Professor Anesthesiology/Pharmacology, Director Pain Medicine, Loyola University Medical Center Maywood, IL; Melissa Thomas, BSN, RN, is a Perioperative Education Coordinator, Baptist Health Louisville, Louisville, KY; Zohn Centimole, APRN, CRNA, MS, is a Staff CRNA, Department of Anesthesia, University of Kentucky Medical Center, Lexington, KY; Carrell Rush, MPH, is a Research Assistant, College of Nursing, University of Kentucky, Lexington, KY; and Christian C. Apfel, PhD, MD, is an Associate Professor in Residence, Anesthesia & Perioperative Care, Epidemiology & Biostatistics, School of Medicine University of California, San Francisco Medical Center at Mt. Zion, San Francisco, CA.

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Address correspondence to Jan Odom-Forren, College of Nursing, University of Kentucky, Lexington, KY 40243; e-mail address: jlforr2@uky.edu.

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MORE THAN 60% OF ALL SURGERIES in the United States are performed in the ambulatory setting, involving more than 34 million patients annually.[1,2] Globally, a recent survey of 17 countries demonstrated that selected surgical procedures were performed in the ambulatory setting from 10% of the time in Poland to 80% of the time in the United States and Canada, closely followed by Denmark.[3] Between 30% and 60% of the patients undergoing ambulatory surgery will experience postdischarge nausea and/or vomiting (PDNV).[4-8] The incidence of PDNV holds constant in studies throughout the world including Japan,[9] South Africa,[10] Australia,[11] China,[12] and India.[13] With millions of patients affected by PDNV, it is vital that we look more closely at the management strategies and patient outcomes.[14] The impact of PDNV requires that treatment of this complication extend well beyond discharge.

Background

Because it occurs at home, PDNV is an underreported condition that can affect the quality of patient recovery.[15] Patients with PDNV have the potential for morbidity and rehospitalization, and the presence of PDNV can adversely affect patient satisfaction with care.[6,16-20] Patients who experience PDNV are likely to manage their symptoms using self-care strategies at home, sometimes by discontinuing medications that they believe are contributing to the problem.[21] Postoperative nausea and vomiting (PONV), nausea and/or vomiting (N/V) that occurs within the first 24-hour period after inpatient surgery,[22-24] is well described, its risk factors are known. It is far better studied than PDNV that occurs after discharge from the health care facility after ambulatory surgery.[22-24] Little research is available in which management and outcomes of PDNV are described. The purpose of this study is to determine patient outcomes and management strategies for self-care of PDNV.

The symptoms of PONV were noted by Kapur[18] two decades ago as the "big, little problem." In 2008, Lichtor and Glass[25] called for an end to N/V after surgery, noted the importance of solving our "big, little problem," and emphasized treatment in the postdischarge period. Chinnappa and Chung[26] referred to PDNV "as an overlooked aspect of ambulatory anesthesia." Recently, Lichtor and Chung[27] called for further study saying "we can still do better."

The outcomes of nausea and vomiting after surgery affect not only the cost of health care but also directly influence satisfaction with care.[15,28] Patients have expressed their dislike of N/V after surgery and rated vomiting as the most undesirable postoperative outcome, even more undesirable than pain or shivering.[29,30] Patients who experienced nausea after surgery were willing to pay US$73 or €65 to €68 out-of-pocket for an antiemetic before surgery, whereas those with a history of vomiting after surgery indicated they would pay US$100 or €96 to €99.[31,32] The specific aims of this study were to: (1) identify the pharmacologic and nonpharmacologic modalities of care that patients used to manage PDNV; (2) compare the incidence and severity of PDNV between those who do and do not use pharmacologic and nonpharmacologic modalities; and (3) identify outcomes including quality of life (QOL), patient function, and satisfaction with care associated with PDNV.

Methods

Design

This was a prospective, comparative, descriptive, and longitudinal study. In this study, we focused on the ambulatory surgery population over a 7-day period describing severity, management strategies, and outcomes including QOL for patients who experienced PDNV after general anesthesia for ambulatory surgery. Patients were not excluded by procedure, general inhalation anesthesia regimen, or risk. The only high-risk inclusion criterion was use of inhalation anesthesia. Anesthesia regimen and medications were not dictated to allow for a realistic view of current clinical conditions in ambulatory surgery centers.[7,8]

Sample

Eligible patients were adults (aged ≥18 years) experiencing an ambulatory surgery procedure under general anesthesia who required a tracheal tube or laryngeal mask airway. Exclusion criteria were inability to communicate in English, surgery ending in a planned or unplanned inpatient stay, current pregnancy, persistent or recurrent N/V present before anesthesia, and regional anesthesia only.[7,8] A total of 248 of 260 patients from the two ambulatory surgery sites had complete 7-day records and formed the sample for this study.