MORBID OBESITY MANAGEMENT INSIGHTS: PRE-OPERATIVE CLINICAL VARIABILITY BY INSURANCE CARRIER IN 8,966 SLEEVE GASTRECTOMY PATIENTS

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INTRODUCTION

The obesity epidemic continues to bring unique medical issues to the operating room. Obese persons (Body Mass Index (BMI) > 30 kg/m²) make-up more than 1/3 of the US adult population (35.7%), while morbidly obese (BMI > 40 kg/m² or > 35 kg/m² with an obesity related comorbidity) patients count as approximately 6% of the population. These numbers could be extrapolated into the surgical patient population. Obese patients and morbidly obese patients present a greater likelihood of complications. Complications arise not only from obesity itself, but also from the comorbid conditions most commonly found including acid reflux/GERD, cancer, depression, female reproductive health disorders, heart disease, high blood pressure, high cholesterol, obstructive sleep apnea, osteoarthritis/joint pain, stress urine incontinence, and type 2 diabetes. Every pre-surgery clinical insight contributes to positive outcomes in the often perilous peri-operative management of medically fragile sleeve gastrectomy patients. Risk factors and complications in obese patients showed a higher prevalence of wound infection, peripheral nerve injury, urinary tract infection, and myocardial infarction. At a rate of 7.7% these complications significantly affect morbidity and mortality. Morbidly obese patients are more profoundly affected with an increased tracheal re-intubation rate, a mortality rate of 2.2% compared to 1.2% for other patients, and increased rate of cardiac arrest.

While problems the obese and morbidly obese patient present to surgeons have been studied and documented, the differences in their prevalence by the most common types of medical insurance carrier are unknown. The objective of this study was to identify variation in the clinical characteristics of sleeve gastrectomy patients according to insurance type. Knowing the variation of these weight-related illnesses and how they are distributed among insurance carriers could enable surgeons to better anticipate problems and improve peri-operative management of these patients.

OBJECTIVE

To identify and differentiate the medical characteristics and weight related obstacles among obese and morbidly obese patients according to health insurance carrier to improve peri-operative management and better anticipate complications.

METHODS and PROCEDURES

We reviewed pre-operative data on obese and morbidly obese patients about to undergo sleeve gastrectomy. Divided into four health insurance groups, we studied 8,966 patients from the Surgical Review Corporation’s BOLD database. The four insurance groups included Medicaid, Medicare, Private insurance and self-pay. A list of variance tested parameters was made and dichotomous parameter distribution was assessed by the Chi squared equation.

Data included patient demographics including weight, BMI, gender, and socio-economic factors as well as medical co-morbidities including cardiopulmonary, abdominal, hepatobiliary, metabolic, hormonal, musculoskeletal, and mental health.

RESULTS

In obese and morbidly obese patients, medical conditions vary widely by insurance status. Among pre-operative sleeve gastrectomy patients, the subset of obese and morbidly obese patients studied, expected medical conditions seemed to indicate that Medicare and Medicaid patients had the highest co-morbidities.

Medicare patients are the oldest, heaviest, and manifest the highest rates of cardiopulmonary, hepatobiliary, metabolic, musculoskeletal, and mental health problems, in addition to having the highest unemployment rate. Medicaid patients, though youngest, have the highest F/I ratio, asthma, liver disease, and tobacco abuse. Private and Self-Pay drink and smoke but have the fewest co-morbidities. Awareness of increased surgical risks for obese Medicare and Medicaid patients should benefit both patients and surgeons in improving peri-operative outcomes.

Medicare patients would require more medical optimization peri-operatively to ensure maximization during their recovery. These patients would benefit from review of antihypertensive regiments and cardiac maximization possibly with the assistance of a cardiologist, close follow-up of diabetics to prevent complications post-operatively as weight is lost, and careful appropriate pain management in light of increased chronic pain conditions likely leading to tolerance to medications and increased pain. Additionally the anesthesiologists would benefit from knowing that Medicare patients were most likely to have obstructive sleep apnea and gastro-esophageal reflux disease so as to alter and improve intra-operative management.

Medicaid patients would benefit from maximization of breathing regimens for asthma peri-operatively with close follow-up of liver function tests. Medicaid patients would also benefit from addressing substance abuse in light of pain management concerns as well as tobacco cessation as part of pulmonary maximization. On the other hand, the private insurance and self-pay patients would benefit from education regarding alcohol consumption post-operatively and careful observation for potential withdrawal. Overall no matter what the insurance status of the patient, each patient’s individual comorbidities should be addressed for maximization of perioperative outcomes. Knowing the insurance status would enable the surgeon to be aware of comorbidities the patient would tend toward, thus better enabling the physician to tailor care to best maximize recovery and reduce complications.

REFERENCES


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