

Single Dose Prophylactic Octreotide Does Not Prevent Intraoperative Carcinoid Crisis

Kristen P. Massimino¹, Ola Harrskog¹,
SuEllen J. Pommier¹, Rodney F. Pommier¹

¹Oregon Health & Science University, Portland, Oregon, 97212

Background: Surgery and anesthesia in carcinoid patients can provoke a carcinoid crisis, which can have serious sequelae, including death. Octreotide prophylaxis is recommended to prevent carcinoid crisis, however there are few reports of outcomes and no large series examining its efficacy. We hypothesized that prophylactic octreotide alone is not sufficient to prevent carcinoid crisis.

Methods: Records of carcinoid patients undergoing abdominal operations during years 2007-2011 were retrospectively reviewed. Effect of clinical factors including octreotide use on intraoperative hemodynamic events (systolic blood pressure < 80 for > 10 minutes or report of hemodynamic instability including hypotension, hypertension, tachycardia or carcinoid crisis) was determined. Association of intraoperative hemodynamic events with postoperative outcomes was evaluated. Rates of intraoperative events in patients treated with octreotide prophylaxis were compared to historic controls.

Results: Ninety-seven intraabdominal operations performed by a single surgeon were reviewed. Ninety percent of patients received preoperative prophylactic octreotide. Fifty six percent received at least one additional intraoperative dose. Twenty three patients (24%) all of whom received prophylactic octreotide experienced a major intraoperative hemodynamic event. This rate is higher than previously published. Intraoperative hemodynamic events correlated with presence of hepatic metastases but not presence of carcinoid syndrome. Post operative complications occurred

in 60% of patients with intraoperative hemodynamic events versus 31% of those with none ($p=0.01$).

Conclusions: Significant intraoperative hemodynamic events occur frequently in carcinoid patients with hepatic metastases regardless of presence of carcinoid syndrome and despite single dose prophylactic octreotide. Occurrence of such events correlates strongly with post-operative complications. Randomized controlled trials are needed to determine whether the administration of prophylactic octreotide is beneficial.