

Warm and Humidified Carbon dioxide during Laparoscopic Roux-en-y Gastric Bypass Surgery for Morbid Obesity Decreases Post-operative Pain and Analgesic requirement.

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Objective: To determine if patients undergoing laparoscopic roux-en-y gastric bypass surgery for morbid obesity experience less post-operative pain and require less analgesics.

Materials and Methods: This is a randomized double blind prospective study. Thirty consecutive morbidly obese patients undergoing laparoscopic roux-en-y gastric bypass surgery from October 2003 to February 2004 were randomized into 2 groups (study and control) of 15 patients. The control group received standard carbon dioxide for insufflation during surgery while the study group received warmed and humidified carbon dioxide administered using a special device called Insuflow (Lexion Inc.). All patients received only morphine by PCA (patient controlled analgesia) for post operative analgesia. Pain scores (On a scale of 0 to 10), 0 being no pain and 10 being the worst pain) and the morphine dose were measured post operatively at 3 hours, 1 day and 2 days.

Results: The mean age of patients in both the groups was 40 years. For the study and control groups respectively, the mean body mass index (BMI) was 39.7 kg/m² v/s 39.6 kg/m² and the mean operative times were 81 and 97 minutes. The morphine requirement post operatively was significantly different between the groups. The study and the control groups respectively received 9 mg v/s 16 mg (P=0.05) by 3 hours post-op, 16 mg v/s 24 mg (p=0.03) by post-op day 1 and 3 mg v/s 28 mg (p=0.01) by post-op day 2. The comparative respective average pain scores were 4 v/s 4.6 three hours post-op and 2.5 v/s 3.9 on post-op day 1.

Conclusions: Patients who received warm and humidified carbon dioxide during laparoscopic roux-en-y gastric bypass surgery for morbid obesity required significantly lesser post operative analgesia than those who did not.