Savel RH, Balasubramanya S, Lasheen S, Gaprindashvili T, Arabov E, Fazylov RM, Lazzaro RS, Macura JM. Beneficial effects of humidified, warmed carbon dioxide insufflation during laparoscopic bariatric surgery: A randomized clinical trial. *Obes Surg* 2005; 15: 64-69

LINK - https://www.ncbi.nlm.nih.gov/pubmed/15760500

Abstract

BACKGROUND:

Recent data has shown that the use of warmed, humidified carbon dioxide (CO2) insufflation during laparoscopic surgery may be associated with better outcomes.

METHODS:

We performed a randomized, doubleblind, prospective controlled clinical trial of 30 patients undergoing laparoscopic Roux-en-Y gastric bypass (LRYGBP). Patients were randomized into 2 groups. The first group (group 1, n=15) received standard (dry, room temperature) CO2 for insufflation during the surgery, while the second group (group 2, n=15) received warmed (35 degrees C) and humidified (95%) CO2. Patients received postoperative analgesia from morphine delivered via a patient-controlled analgesia (PCA) pump. Pain scores (on a scale of 0 to 10, 0 being no pain and 10 being the worst pain) were measured postoperatively at 3 h, 6 h, 1 day and 2 days. The amount of morphine that was delivered through the PCA was also measured at the same time intervals. Operating-room (OR) time, core temperature, and total hospital length of stay were documented.

RESULTS:

Postoperative pain as documented by pain scores and narcotic usage were not statistically different in the 2 groups. We demonstrated a statistically significant difference (mean+/-SD) in OR time (76+/-16 min vs 101+/-34 min, P=0.02), total hospital length of stay (3.2+/-.4 days vs 4.0+/-.9 days, P=0.01) and end-of-case core temperature (36.2+/-.5 degrees C vs 35.7+/-.6 degrees C, P=0.02) in group 2 compared with group 1.

CONCLUSION:

The use of warmed, humidified CO2 insufflation in bariatric patients undergoing LRYGBP was not associated with any significant benefit with regards to postoperative pain.