

The effects of low dose ketamine on postoperative pain and adverse events after intraoperative remifentanil infusions

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INTRODUCTION

In modern surgery, with the rapid introduction of new surgical techniques and enhanced recovery protocols, it is particularly important to maintain acceptable postoperative pain intensity using the lowest possible doses of morphine. The search for methods for reduction of postoperative opioid requirements is constantly evolving. Ketamine is one of the most attractive additives to achieve these goals, but the exact dose of ketamine is still not accurate.

METHODS

A prospective, randomized, double-blind, placebo-controlled study. The study included 47 patients, who underwent bariatric surgery at HLUHS. Following informed consent adult obese patients up to ASA class III undergoing laparoscopic gastric bypass with remifentanil anaesthesia were given equal volume (5 ml) of study medication: single dose of ketamine 0,3 mg/kg (test, group K=30) or saline (control, group S=17) at anaesthesia induction. Postoperatively pain intensity, morphine requirements and side effects were recorded every 15min up to 155 minutes in postanesthesia care unit.

CONCLUSIONS

The 0,3 mg/kg (LBM) ketamine dose reduces postoperative morphine consumption without impact on postoperative side effects in bariatric patients.

AIM

Assess the significance of low dose ketamine (0,3mg/kg by LBM (lean body mass)) for postoperative morphine requirements and side effects in patients after remifentanil anaesthesia in bariatric surgery.

RESULTS

The pain intensity was similar in both groups in all points of observation ($p=0,05-0,973$).

Charakteristics	Test group K (30)	Control group S (17)	P value
BMI (mean±SD)	42±6,4	43,7±6,1	P>0,005
Age (mean±SD)	42±12	46±10	P>0,005
Gender			P>0,005
Females	73,3%	70,6%	
Males	26,7%	29,4%	

Morphine consumption (mg)	Test group K (17)	Control group S (30)	P value
Median	6,0	10,0	p<0,001)
Percentile (25%-75%)	(5,0-9,0)	(9,0-11,5)	