



Statistical analysis for demographic data for the two groups revealed that there was no statistically significant difference (P value >0.05) and there was no statistically significant difference in the duration of surgery as shown in table (1).

Table (1): Comparison between the two studied groups as regard demographic data

	VCV group (N=26)	IRV group (N=26)	P value
Age (years)	34.42 ± 6.836	33.58 ± 6.113	0.640
BMI (kg/m2)	41.38 ± 3.44	41.66 ± 4.19	0.797
Sex (M/F)	15/11	12/14	0.5788
Duration of surgery (minutes)	63.54±4.5	65.32±3.8	0.1296

The present study compared the Inverse ratio volume controlled ventilation (I:E ratio 2:1) to the conventional volume controlled ventilation with I:E ratio 1:2 in morbidly obese patients undergoing laproscopic sleeve gastrectomy operations. The study reveals an increase in arterial Pao₂, mean airway pressure, and compliance in the inverse ratio group together with a significant decrease in peak airway pressure, and plateau pressure, with no statistically significant change in hemodynamics either mean arterial pressure or heart rate.

To our knowledge this study is the first to assess the inverse ratio volume control ventilation in bariatric surgery with reverse trendlenburg position, all previous studies either used the Pressure controlled mode or just prolonged the I:E ratio, according to the metanalysis done by Souza et al there is no advantage of PCV above VCV in morbid obese patient ventilation.

The limitations of our study is that detection of atelectasis wasn't included as oxygenation alone is not an indicator of atelectasis in pneumoperitoneum

In conclusion, this study found out that IRV of volume control mode is superior to conventional ratio VCV in morbidly obese patient undergoing laproscopic sleeve gastrectomy as it increases the lung compliance, Partial pressure of oxygen and mean airway pressure together with a decrease in peak and plateau pressures.