

Lignocaine versus ketamine as an adjunct to propofol for optimal sedation during endoscopic retrograde cholangiopancreatography (ERCP): a randomized controlled trial

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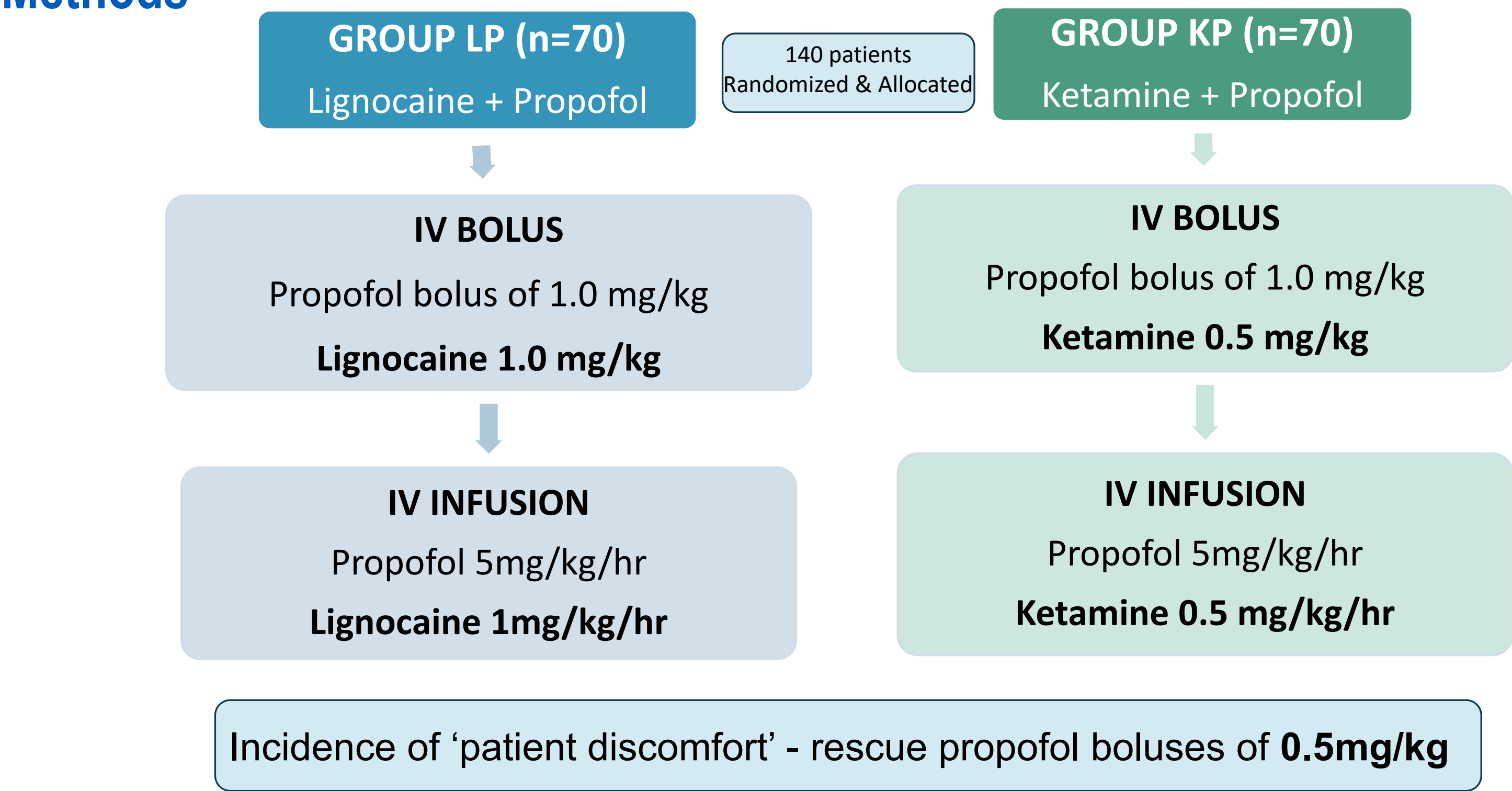


Introduction

- ERCP is an ambulatory procedure performed under propofol based sedation.
- Ketamine as an adjunct lowers propofol requirement & maintains hemodynamic stability.¹
- Limitations - sympathetic stimulation, emergence delirium, prolonged recovery time.²
- Lignocaine as an adjunct has similar sedative properties and faster recovery without the side-effects of ketamine^{3,4}

This study was conducted to assess if lignocaine is non-inferior to ketamine as an adjunct for maintaining optimal sedation during ERCP.

Methods



- The average propofol consumption between the two groups was compared.
- Average heart rate and mean arterial pressure compared
- Incidence of desaturation (SpO₂ <95%), emergence delirium compared
- Post procedurally, time taken to achieve Ramsay Sedation Scale (RSS) score of 3, Modified Aldrete Score (MAS) ≥9 noted & compared
- Endoscopist, patient satisfaction and severity of sore throat assessed.

Results

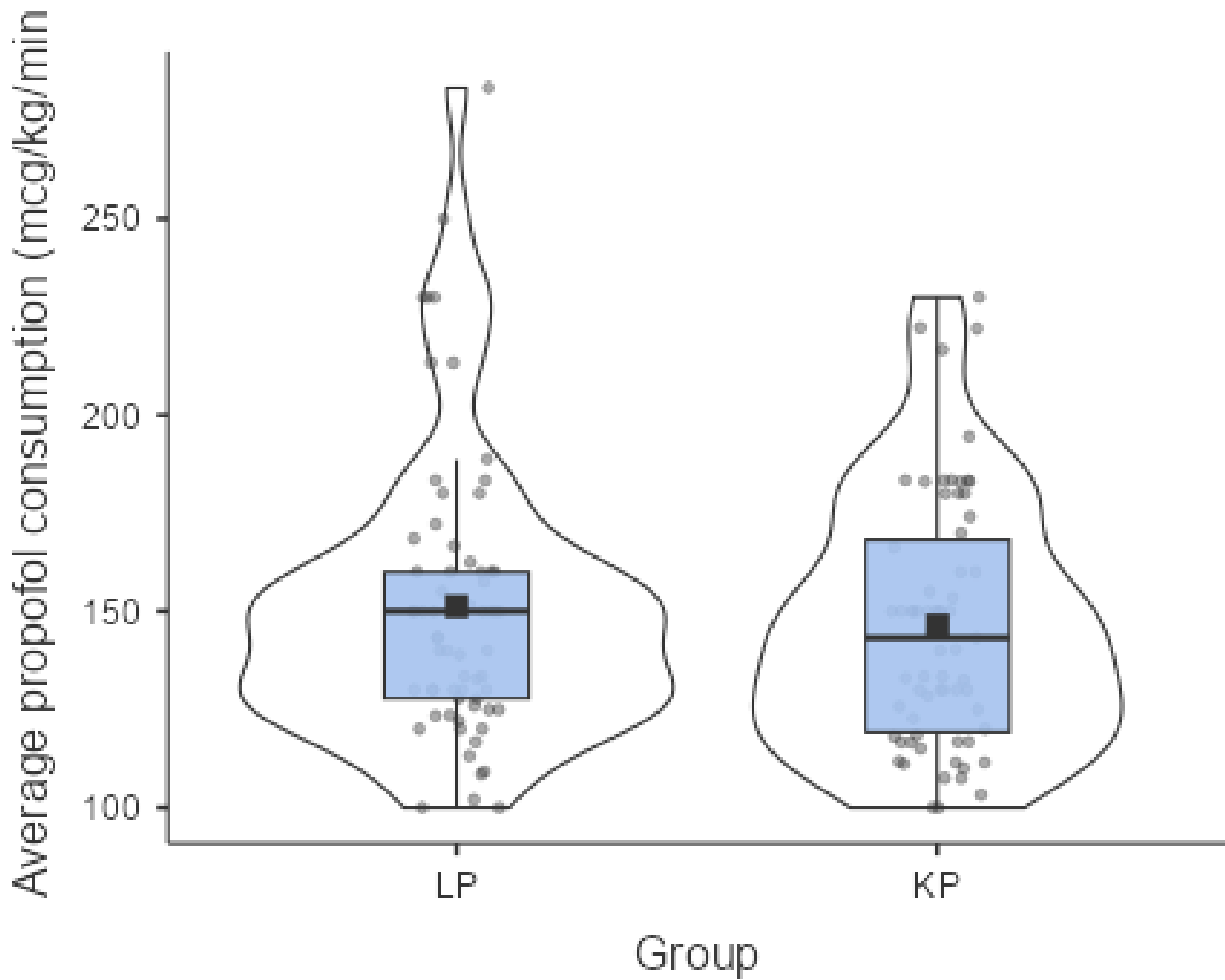
Primary Outcome

LP was non inferior to KP (15% non-inferiority margin 21.45 mcg/kg/min) with respect to average propofol consumption.

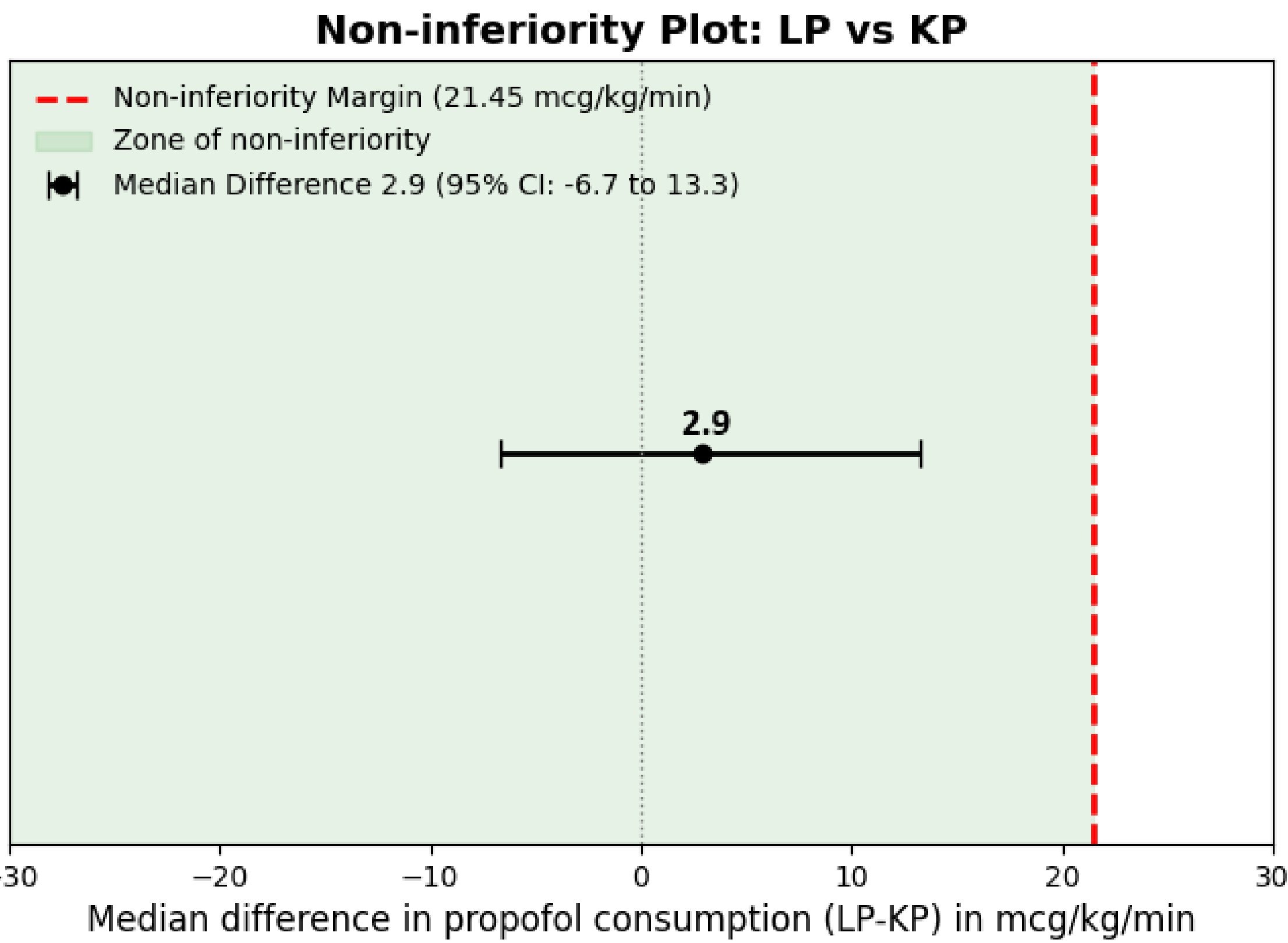
Table 1: Comparison of average propofol consumption between the two groups (median with IQR)

Average Propofol Consumption (mcg/kg/min)	Group LP (n=67)	Group KP (n=67)	p-value
	150 (128,160)	143 (119, 168)	0.485

*Mann-Whitney U test



Violin plot for average propofol consumption comparison between the two groups. The black square represents the median value, the blue box represents the IQR, and the whiskers represent the range of data.



Secondary Outcomes

Table 2: Comparison of quantitative secondary outcomes reported as median with IQR

S. No	Outcomes	Group LP (n=67)	Group KP (n=67)	P Value
1	Time (in min) to achieve a score >3 on RSS	4 (3,6)	6 (4,8)	0.003
2	Time (in min) to achieve a score ≥9 on MAS	7 (5,9)	10 (7.5,14.5)	<0.001
3	Incidence of emergence delirium	0	4	0.119

*Mann-Whitney U test, Fisher's exact test

No significant difference was noted in other measured parameters.

Conclusion

Lignocaine is non-inferior to ketamine as an adjunct to propofol for optimal sedation in adult patients undergoing ERCP. Compared to ketamine, lignocaine resulted in significantly lesser time to recovery from anaesthesia.

Limitations

- Single-centre study
- Patients >65 years and ASA ≥ III were excluded. Study objectives could not be assessed in high-risk patients.
- Results may vary in settings where adjuvant dose titration is permissible.
- Lignocaine may not be non-inferior to ketamine if ketamine was administered at higher doses.

References

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