

Comparison of intracuff alkaline Lignocaine and MgSO₄ and its effect on incidence of sore throat and hemodynamic response in elective laparotomy cases: An observational study.

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I. Introduction

High intracuff pressure in ET tube may cause tracheal lesions, which causes post operative sore throat (POST) and hemodynamic changes like change in Mean arterial pressure and Pulse rate.

II. Aim Of The Study

The aim of this study was to evaluate the comparative incidence of post operative sore throat (POST) and haemodynamic response of intracuff alkaline lignocaine and MgSO₄.

III. Material and methods

- ❖ After obtaining ethical approval from ethical committee of college and written informed consent from the patients scheduled for laparotomy.
- ❖ It was double blinded study in which the anaesthesiologist anaesthetizing the case and data recorder was blind to it.
- ❖ In this study two groups A and B were taken, each of which had 50 patients.
- ❖ For group A cuff was filled with 40mg of lignocaine and 1.4% of sodium bicarbonate (ie 1/6th part of 8.4% sodabcarb solution)
- ❖ For group B cuff was filled with 250 mg of MgSO₄ with water for injection.
- ❖ Cuff pressure measured just before deflating the cuff and recorded, by hand held manometer & maintained at 20 cm of H₂O.
- ❖ Extubation done after checking for spontaneous ventilation, and ability to follow verbal commands.
- ❖ Cough response checked at 2hrs and 24 hrs and hemodynamics response at time of extubation (0min), 30min, 60min, 120min after recovery.

Inclusion criteria-

1. Of either gender
2. Age 18 years to 50 years
3. ASA 1 and 2
4. Duration of laparotomy 60 to 90 min

Premedication-Inj Glycopyrrolate 0.005mg/kg,
Preoxygenation with 100% O₂ for 3 minutes

Induction

Inj Fentanyl 2 microgram/kg body weight
Inj Propofol 2mg/kg body weight,
Inj Atracurium 0.5mg/kg body weight

Maintenance

Nitrous: Oxygen (65:35), Inj Atracurium 1/4th the intubating dose depending upon the ET_{CO}2 changes .
ISOFLURANE 1% is used

Reversal

Inj Glycopyrrolate 0.005 mg/kg and
Inj Neostigmine 0.05 mg/kg body weight

Monitoring done which included

- PULSE RATE
- ECG,
- NIBP,
- SPO₂,
- ET_{CO}2

IV. Results

	Group A	Group B	P value
Mean age	38.42+/-9.81	37.32+/-9.86	0.90
Mean weight	57.46+/-8.37	58.38+/-9.32	0.92
Mean duration of surgery	82.42+/-5.37	83.16+/-4.54	0.93
No. of Male/Female	25/25	25/25	
ASA 1	12	18	
ASA 2	38	32	

Incidence of Cough

Group	A	B
2HRS	7 patients	8 patients
24 HRS	9 patients	9 patients
TOTAL	16 of 50 patients	17 of 50 patients

Comparison of Pulse Rate(per minute)

Groups	0min	30 min	60 min	120min
	MEAN±SD	MEAN±SD	MEAN±SD	MEAN±SD
A	82.70±9.61	94.06±11.11	97.02±8.83	90.60±10.75
B	87.18±11.20	98.06±9.34	102.18±11.2	91.86±11.25
P value	0.70	0.77	0.72	0.94

Comparison of Mean Arterial Pressure(mm of Hg)

Groups	0min	30min	60min	120min
	MEAN±SD	MEAN±SD	MEAN±SD	MEAN±SD
A	91.60±7.43	108.76±9.98	102.72±8.63	99.38±8.27
B	97.16±8.58	114.88±9.68	102.12±9.11	102.98±7.52
P value	0.66	0.68	1	0.83

V. Conclusion

- There is no significant comparative difference between incidence of postoperative sore throat and changes in hemodynamic response after the use of alkaline Lignocaine and MgSO₄.

Limitations Of My Studies :

1. Serum Mg level and amount of diffusion of Mg from cuff can't measured.
2. Serum lignocaine level and amount of diffusion of lignocaine can't measured.
3. Follow up of patient not done after 48 hrs of surgery

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