

reference	participants' characteristics	intervention group/ control group	outcomes	critical appraisal/ conclusion																																																																																		
<p>Gupta et al. 2011 Effect of magnesium infusion on thoracic epidural analgesia. Saudi J Anaesth. 2011;5(1):55-61.</p>	<p>inclusion criteria</p> <ul style="list-style-type: none"> - age 35–60 yrs - ASA physical status II–III - scheduled for LVRS with $\geq 50\%$ of predicted FEV₁, FEV₁/FVC and MEFR <p>exclusion criteria</p> <ul style="list-style-type: none"> - ASA physical status IV - signs and symptoms of systemic infection or local sepsis - bleeding diathesis or coagulation abnormalities - diabetes mellitus, ischemic heart disease, hypertension, malignancy, renal or hepatic compromise or any major systemic illness - ongoing antiplatelet or anticoagulant therapy - haemodynamic instability - hypersensitivity to the study drugs - spinal deformity - progressive neurological disease - mental retardation - psychiatric illness - pregnancy - those who on awakening from general anaesthesia complained of pain or not responding to vocal command <p>demographic data:</p> <table border="1"> <thead> <tr> <th></th> <th>group A</th> <th>group B</th> <th>p</th> </tr> </thead> <tbody> <tr> <td>age (yr)</td> <td>47(10.6)</td> <td>45 (10)</td> <td>>0.05</td> </tr> <tr> <td>sex (m/f)</td> <td>16/14</td> <td>19/11</td> <td></td> </tr> <tr> <td>BMI (kg/m²)</td> <td>28 (5.7)</td> <td>27 (4.1)</td> <td>>0.05</td> </tr> <tr> <td>duration of surgery (min)</td> <td>130 (25.55)</td> <td>125 (20.25)</td> <td>>0.05</td> </tr> </tbody> </table> <p>patient flow and follow up:</p> <p>total patient number included: 60</p> <p>randomised in: group A: 30 group B: 30</p> <p>excluded: - none reported</p> <p>analysed: 60</p> <p>follow-up: 1, 2, 3, 4, 5, 6, 9, 12 h postop</p>		group A	group B	p	age (yr)	47(10.6)	45 (10)	>0.05	sex (m/f)	16/14	19/11		BMI (kg/m ²)	28 (5.7)	27 (4.1)	>0.05	duration of surgery (min)	130 (25.55)	125 (20.25)	>0.05	<p>intervention prior to anaesthesia</p> <ul style="list-style-type: none"> - not reported <p>mode of anaesthesia</p> <ul style="list-style-type: none"> - fentanyl <p>surgical approach</p> <ul style="list-style-type: none"> - lung volume reduction surgery <p>at the end of surgery</p> <ul style="list-style-type: none"> - 7 mL (0.125%) bupivacaine + fentanyl 50 µg (0.5 mL) - group B (control): before skin closure 7 mL of 0.125% bupivacaine + fentanyl 50 µg - group A (Mg): same as control + magnesium sulphate injection 30 mg/kg IV bolus followed by infusion of 10 mg/kg/h and continued up to 24 h <p>postoperative analgesia</p> <ul style="list-style-type: none"> - TEA, for 72 h bupivacaine (0.125% at 1.5 mL/thoracic segment space) along with fentanyl 50 µg (0.5 mL) <p>rescue analgesia</p> <ul style="list-style-type: none"> - tramadol injection 2 mg/kg bodyweight IV 	<p>postoperative pain [VAS (mm)]: mean(SD)</p> <table border="1"> <thead> <tr> <th>h postop</th> <th>group A</th> <th>group B</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>10.2 (3.1)</td> <td>10.6 (4.4)</td> </tr> <tr> <td>1</td> <td>11.6 (3.2)</td> <td>12.4 (3.28)</td> </tr> <tr> <td>2</td> <td>11.8 (2.8)</td> <td>12.6 (3.98)</td> </tr> <tr> <td>3</td> <td>11.4 (3.66)</td> <td>12.88 (4.6)</td> </tr> <tr> <td>4</td> <td>12.8(3.51)</td> <td>22.8 (4.46)</td> </tr> <tr> <td>5</td> <td>12.2 (3.44)</td> <td>38.88 (4.82)</td> </tr> <tr> <td>6</td> <td>15.2 (3.02)</td> <td>33.56 (4.26)</td> </tr> <tr> <td>9</td> <td>25.4 (3.98)</td> <td>22.22 (3.4)</td> </tr> <tr> <td>12</td> <td>30.88 (4.2)</td> <td>32.2 (5.66)</td> </tr> </tbody> </table> <p>other analgesia: mean (SD)</p> <table border="1"> <thead> <tr> <th></th> <th>group A</th> <th>group B</th> <th>p</th> </tr> </thead> <tbody> <tr> <td>total IV dose of fentanyl in intraop period (µg)</td> <td>110 (15.25)</td> <td>115 (15.25)</td> <td>>0.05</td> </tr> <tr> <td>total epidural dose of fentanyl in 24 h (µg)</td> <td>70.55 (15.65)</td> <td>160.75 (20.75)</td> <td><0.05</td> </tr> <tr> <td>total dose of bupivacaine in 24 h (mg)</td> <td>15.75 (5.75)</td> <td>32.75 (5.67)</td> <td><0.05</td> </tr> </tbody> </table> <p>adverse effects/ events in first 24 h [n (%)]</p> <table border="1"> <thead> <tr> <th></th> <th>group A</th> <th>group B</th> <th>p</th> </tr> </thead> <tbody> <tr> <td>pruritus</td> <td>2 (7)</td> <td>10 (33)</td> <td><0.05</td> </tr> <tr> <td>nausea</td> <td>3 (10)</td> <td>14 (47)</td> <td><0.05</td> </tr> <tr> <td>vomiting</td> <td>1 (3)</td> <td>9 (30)</td> <td><0.05</td> </tr> </tbody> </table>	h postop	group A	group B	0	10.2 (3.1)	10.6 (4.4)	1	11.6 (3.2)	12.4 (3.28)	2	11.8 (2.8)	12.6 (3.98)	3	11.4 (3.66)	12.88 (4.6)	4	12.8(3.51)	22.8 (4.46)	5	12.2 (3.44)	38.88 (4.82)	6	15.2 (3.02)	33.56 (4.26)	9	25.4 (3.98)	22.22 (3.4)	12	30.88 (4.2)	32.2 (5.66)		group A	group B	p	total IV dose of fentanyl in intraop period (µg)	110 (15.25)	115 (15.25)	>0.05	total epidural dose of fentanyl in 24 h (µg)	70.55 (15.65)	160.75 (20.75)	<0.05	total dose of bupivacaine in 24 h (mg)	15.75 (5.75)	32.75 (5.67)	<0.05		group A	group B	p	pruritus	2 (7)	10 (33)	<0.05	nausea	3 (10)	14 (47)	<0.05	vomiting	1 (3)	9 (30)	<0.05	<p>methodological shortcomings</p> <ul style="list-style-type: none"> - method used to implement the random allocation sequence not reported - not reported how the sequence was concealed until interventions were assigned - not reported who generated the allocation sequence, who enrolled participants, and who assigned the participants to their groups - participant flow through each stage was not reported - number of participants (denominator) in each group included in each analysis and whether the analysis was by "intention to treat" not reported <p>level of evidence: 1</p> <p>authors' conclusion</p> <p>"IV magnesium can prolong opioid-induced analgesia while minimizing nausea, pruritus, and somnolence. It may be suggested that magnesium may be considered as one of the ingredients of multimodal analgesic stratagems in reducing the severity of post-thoracotomy pain."</p>
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