

reference	participants' characteristics	intervention group/ control group	outcomes	critical appraisal/ conclusion																																																																			
<p>Querghi et al. 2011</p> <p>The effect of adding intrathecal magnesium sulphate to morphine-fentanyl spinal analgesia after thoracic surgery. A prospective, double-blind, placebo-controlled research study.</p> <p>Ann Fr Anesth Reanim. 2011;30(1):25-30.</p>	<p>inclusion criteria</p> <ul style="list-style-type: none"> - ASA physical status I or II - age 18–70 years <p>exclusion criteria</p> <ul style="list-style-type: none"> - lack of patient consent - atrioventricular block - inability to comprehend pain scale - localised or systemic sepsis - contraindications to regional techniques - need for an additional incision - previously treatment with calcium channel blockers - preoperative blood magnesium level outside the normal range (0.8–1.1 mmol/l) <p>demographic data:</p> <table> <thead> <tr> <th>group S</th> <th>group Mg</th> <th>p</th> </tr> </thead> <tbody> <tr> <td>age (yrs)</td> <td></td> <td></td> </tr> <tr> <td>53±9</td> <td>46±15</td> <td>0.056</td> </tr> <tr> <td>ASA physical status (I/II)</td> <td></td> <td></td> </tr> <tr> <td>18/11</td> <td>19/10</td> <td>0.50</td> </tr> <tr> <td>weight (kg)</td> <td></td> <td></td> </tr> <tr> <td>57±8</td> <td>72±24</td> <td>0.18</td> </tr> <tr> <td>body weight (kg/m²)</td> <td></td> <td></td> </tr> <tr> <td>22±3</td> <td>25±4</td> <td>0.56</td> </tr> <tr> <td>sex (m/f)</td> <td></td> <td></td> </tr> <tr> <td>20/9</td> <td>19/10</td> <td>0.50</td> </tr> <tr> <td>preoperative blood magnesium level (mg/L)</td> <td></td> <td></td> </tr> <tr> <td>0.86±0.08</td> <td>0.9±0.11</td> <td>0.25</td> </tr> </tbody> </table> <p>patient flow and follow up:</p> <p><u>total patient number included:</u> 59</p> <p><u>randomised in:</u> group S: 29 group Mg: 29</p> <p><u>excluded:</u> 1</p> <p><u>analysed:</u> 58</p> <p><u>follow-up:</u> 1, 2, 6, 10, 14, 18, 20, 24, 28, 32, 36 h</p>	group S	group Mg	p	age (yrs)			53±9	46±15	0.056	ASA physical status (I/II)			18/11	19/10	0.50	weight (kg)			57±8	72±24	0.18	body weight (kg/m ²)			22±3	25±4	0.56	sex (m/f)			20/9	19/10	0.50	preoperative blood magnesium level (mg/L)			0.86±0.08	0.9±0.11	0.25	<p>intervention prior to anaesthesia</p> <ul style="list-style-type: none"> - group S: 25 µg fentanyl citrate (0.5 mL) + 300 µg of morphine + 1.0 mL preservative-free 0.9% sodium chloride - group Mg: 25 µg fentanyl citrate (0.5 mL) + 300 µg of morphine + 50 mg of magnesium sulphate 5% (1.0 mL) <p>mode of anaesthesia fentanyl</p> <p>surgical approach</p> <ul style="list-style-type: none"> - elective posterolateral thoracotomy <table> <thead> <tr> <th></th> <th>S</th> <th>Mg</th> <th>p</th> </tr> </thead> <tbody> <tr> <td>lobectomy</td> <td>16</td> <td>15</td> <td>0.5</td> </tr> <tr> <td>kystectomy</td> <td>6</td> <td>10</td> <td>0.22</td> </tr> <tr> <td>bullectomy</td> <td>7</td> <td>4</td> <td>0.25</td> </tr> </tbody> </table> <p>postoperative analgesia</p> <ul style="list-style-type: none"> - PCA morphine 1 mg/7 min <p>supplemental analgesia</p> <ul style="list-style-type: none"> - IV paracetamol 60 mg/kg/day <p>rescue analgesia</p> <ul style="list-style-type: none"> - if VAS>3-4: titration of IV morphine, 2 mg/5 min 		S	Mg	p	lobectomy	16	15	0.5	kystectomy	6	10	0.22	bullectomy	7	4	0.25	<p>postoperative pain [VAS]: mean (95% CI)</p> <p>VAS pain scores at rest and on coughing were similar in all groups.</p> <p>total dosage of morphine in 36 h: median and interquartile 25–75% or number (percentage)</p> <ul style="list-style-type: none"> - total 36 h IV morphine requirements were significantly lower in group Mg <table> <thead> <tr> <th>group Mg</th> <th>group S</th> <th>p</th> </tr> </thead> <tbody> <tr> <td>14 [9.50–26.50]</td> <td>33 [30–41]</td> <td><0.001</td> </tr> </tbody> </table> <ul style="list-style-type: none"> - total dose of IV morphine administered during titration was significantly lower in group Mg <table> <thead> <tr> <th>group Mg</th> <th>group S</th> <th>p</th> </tr> </thead> <tbody> <tr> <td>4 [2–8]</td> <td>8 [6–10]</td> <td>0.001</td> </tr> </tbody> </table> <ul style="list-style-type: none"> - morphine consumption was significantly lower in the group MgSO₄ at intervals 0–12, 12–24 and 24–36 h <p>adverse effects/ events:</p> <ul style="list-style-type: none"> - none reported 	group Mg	group S	p	14 [9.50–26.50]	33 [30–41]	<0.001	group Mg	group S	p	4 [2–8]	8 [6–10]	0.001	<p>methodological shortcomings</p> <ul style="list-style-type: none"> - not reported who generated the allocation sequence, who enrolled participants, and who assigned the participants to their groups <p>level of evidence: 1</p> <p>authors' conclusion</p> <p>"In patients undergoing pulmonary resection with elective posterolateral thoracotomy, magnesium sulphate (50 mg), when added to spinal morphine analgesia, reduces postoperative morphine requirements and the number of patients requiring morphine titration with similar incidence of side effects."</p>
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