

reference	participants' characteristics	intervention group/ control group	outcomes	critical appraisal/ conclusion																																																																																															
<p>Kaya et al. 2012 Thoracic paravertebral block for video-assisted thoracoscopic surgery: single injection versus multiple injections. J Cardiothorac Vasc Anesth. 2012;26(1):90-4.</p>	<p>inclusion criteria - age 18–65 yrs - ASA physical status I–III</p> <p>exclusion criteria - cardiac, renal or hepatic failure, - allergy to study medications - uncontrolled systemic disease - FEV₁ <60% of reference value - sleep apnea</p> <p>demographic data (mean±SD):</p> <table border="1"> <thead> <tr> <th></th> <th>group S</th> <th>group M</th> <th>p</th> </tr> </thead> <tbody> <tr> <td>sex (m/f)</td> <td>20/5</td> <td>18/7</td> <td></td> </tr> <tr> <td>age (yrs)</td> <td>52.7±5.9</td> <td>53.1±7.8</td> <td>0.836</td> </tr> <tr> <td>weight (kg)</td> <td>73.1±9.2</td> <td>72.2±7.6</td> <td>0.704</td> </tr> <tr> <td>height (cm)</td> <td>167.5±7.9</td> <td>168.5±9.2</td> <td>0.678</td> </tr> <tr> <td>ASA class I/II/III</td> <td>3/18/4</td> <td>5/17/3</td> <td>0.701</td> </tr> <tr> <td>FEV₁ (% predicted)</td> <td>84.2±6.8</td> <td>86.9±7.6</td> <td>0.188</td> </tr> <tr> <td>FVC (% predicted)</td> <td>87.9±7.6</td> <td>88.3±8.1</td> <td>0.856</td> </tr> </tbody> </table> <p>patient flow and follow up: total patient number included: 50 randomised in: group S: 25 group M: 25 excluded: 0 analysed: 50</p>		group S	group M	p	sex (m/f)	20/5	18/7		age (yrs)	52.7±5.9	53.1±7.8	0.836	weight (kg)	73.1±9.2	72.2±7.6	0.704	height (cm)	167.5±7.9	168.5±9.2	0.678	ASA class I/II/III	3/18/4	5/17/3	0.701	FEV ₁ (% predicted)	84.2±6.8	86.9±7.6	0.188	FVC (% predicted)	87.9±7.6	88.3±8.1	0.856	<p>intervention given with anaesthesia - PVB solution: 0.5% bupivacaine, 20 mL + 1:200,000 epinephrine - group M, 4 mL of the solution were injected at each level. multiple-injection thoracic PVBs at T4 to T8 - group S, 20 mL of the solution were injected in a single dose a single-injection thoracic PVB at T6 - total dose of bupivacaine did not exceed 3 mg/kg</p> <p>mode of anaesthesia fentanyl</p> <p>surgical approach (n)</p> <table border="1"> <thead> <tr> <th></th> <th>group S</th> <th>group M</th> <th>p</th> </tr> </thead> <tbody> <tr> <td>Wedge resection</td> <td>5</td> <td>7</td> <td>0.741</td> </tr> <tr> <td>Lung biopsy</td> <td>6</td> <td>5</td> <td>1.0</td> </tr> <tr> <td>Pleural biopsy</td> <td>8</td> <td>7</td> <td>1.0</td> </tr> <tr> <td>Pleurodesis</td> <td>6</td> <td>6</td> <td>1.258</td> </tr> </tbody> </table> <p>Duration of surgery (min) 49.7±9.8 46.8±8.3 0.263</p> <p>at the end of surgery not reported</p> <p>supplemental analgesia - for 24 h post op, IM diclofenac (75 mg, b.i.d.)</p> <p>postoperative analgesia - PCA morphine, 30 µg/kg, 10 min lo</p>		group S	group M	p	Wedge resection	5	7	0.741	Lung biopsy	6	5	1.0	Pleural biopsy	8	7	1.0	Pleurodesis	6	6	1.258	<p>postoperative pain [VAS_R at rest, VAS_C on coughing]: median (interquartile range).</p> <table border="1"> <thead> <tr> <th></th> <th>group S</th> <th>group M</th> </tr> </thead> <tbody> <tr> <td>h VAS_R VAS_C VAS_R VAS_C</td> <td></td> <td></td> </tr> <tr> <td>0</td> <td>2(0-5)</td> <td>3(2-5) 2(0-4) 3(2-6)</td> </tr> <tr> <td>1</td> <td>2(0-5)</td> <td>4(2-5) 2(0-4) 3(3-5)</td> </tr> <tr> <td>2</td> <td>3(0-5)</td> <td>3(2-4) 2(0-4) 3(2-4)</td> </tr> <tr> <td>4</td> <td>2(0-4)</td> <td>4(3-5) 2(0-4) 4(3-5)</td> </tr> <tr> <td>8</td> <td>2(0-4)</td> <td>3(2-5) 2(0-4) 3(2-5)</td> </tr> <tr> <td>12</td> <td>2(0-4)</td> <td>3(2-4) 2(0-4) 3(2-4)</td> </tr> <tr> <td>24</td> <td>2(0-4)</td> <td>3(2-3) 2(0-3) 3(2-4)</td> </tr> </tbody> </table> <p>- pain scores were similar in both groups</p> <p>time to first analgesic request [h]: mean±SD</p> <table border="1"> <thead> <tr> <th></th> <th>group S</th> <th>group M</th> <th>p</th> </tr> </thead> <tbody> <tr> <td></td> <td>1.9±0.7</td> <td>1.6±0.5</td> <td>0.509</td> </tr> </tbody> </table> <p>total dosage of morphine in 24 h - similar in both groups</p> <p>patient satisfaction with analgesic procedure 4-point satisfaction scale (0=very unsatisfied, 1=unsatisfied, 2=satisfied, 3=very satisfied)</p> <table border="1"> <thead> <tr> <th></th> <th>group S</th> <th>group M</th> <th>p</th> </tr> </thead> <tbody> <tr> <td></td> <td>1/2/9/13</td> <td>3/4/13/5</td> <td>0.028</td> </tr> </tbody> </table> <p>- patient satisfaction with the analgesic procedure was significantly greater in group S due to shorter procedure time with the single injection (p< 0.05)</p> <p>adverse effects/ events: n (%) - none reported</p>		group S	group M	h VAS _R VAS _C VAS _R VAS _C			0	2(0-5)	3(2-5) 2(0-4) 3(2-6)	1	2(0-5)	4(2-5) 2(0-4) 3(3-5)	2	3(0-5)	3(2-4) 2(0-4) 3(2-4)	4	2(0-4)	4(3-5) 2(0-4) 4(3-5)	8	2(0-4)	3(2-5) 2(0-4) 3(2-5)	12	2(0-4)	3(2-4) 2(0-4) 3(2-4)	24	2(0-4)	3(2-3) 2(0-3) 3(2-4)		group S	group M	p		1.9±0.7	1.6±0.5	0.509		group S	group M	p		1/2/9/13	3/4/13/5	0.028	<p>methodological shortcomings - 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 - participant flow through each stage was not reported - protocol deviations from study as planned not described - dates defining the period of recruitment and follow-up not reported</p> <p>level of evidence: 1</p> <p>authors' conclusion "Multiple-injection PVB provided no extra benefit to postoperative pain control compared with the single-injection PVB. However, the single-injection technique was characterized by a greater patient satisfaction associated with a shorter procedure time and the likelihood of decreased complications."</p>
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