

Supplementary Table. 2. The characteristics of included studies in detail.

		Butkovic 2007 [15]	Weber 2007 [7]	St.Peter 2012 [14]	Sujka 2019 [10]
Epidural group	Patients (n)	14	20	55	32
	Mean age	14 ± 5.5	14.8 ± 4.2	15.5 ± 2.9	15 ± 1.4
	Gender, Male (%)	11 (79%)	15 (75%)	N/A	31 (91%)
	Weight (kg)	52.8 ± 11.3	53.7 ± 15.8	57.2 ± 14.6	55.9 ± 10.4
	Regimen	Bupivacaine 0.125% + fentanyl 2 mcg/ml	Ropivacaine 0.2% + fentanyl 2 mcg/ml	Ropivacaine 0.1% + fentanyl 2 mcg/ml + clonidine 1.5 mcg/ml	Ropivacaine 0.2% + fentanyl 1 mcg/ml + clonidine 1.5 mcg/ml
	Level	T7-8, T8-9	T6-9, T7-8	T6-7, T7-8	T6-7, T7-8
	Infusion rate	0.15 ml/kg/hr	0.2 ml/kg/hr	0.3 ml/kg/hr (max. 10 ml/hr)	0.3 ml/kg/hr
	Initial Bolus	N/A	N/A	0.3 ml/kg	0.3 ml/kg
	On demand epidural dose	N/A	0.1 ml/kg	0.05 ml/kg to a max. of 4 ml or a cumulative dose of 14 ml/hr	0.05 ml/kg (max. 3 ml) bolus available every 20 minutes (hourly max. including basal 14 ml/hr)
	Rescue medication	N/A	0.1 ml/kg ropivacaine 0.2% +fentanyl 2 mcg/ml	0.2% ropivacaine or 1% lidocaine	5-10 mcg/kg hydromorphone max. 500 mcg/dose IV every 6 minutes
Removal of epidural catheter	N/A	POD 4	POD 2.8 ± 0.5	POD 3	
IV group	Patients (n)	14	20	55	33
	Mean age	14.5 ± 4.5	16.7 ± 5.2	13.7 ± 3.0	14.5 ± 1.3
	Gender, Male (%)	10 (71%)	17 (85%)	N/A	29 (90%)

Weight (kg)	56.9 ± 11.3	56.7 ± 15.1	48.4 ± 14.3	53.9 ± 7.7
Regimen	Fentanyl	Morphine	Hydromorphone	Hydromorphone
Basal infusion	0.1 mcg/kg/hr	No	5-6 mcg/kg/hr	4-5 mcg/kg/hr
On demand bolus	0.2 mcg/kg	0.02 mg/kg	5-6 mcg/kg	4-5 mcg/kg
Lockout time	10 min	6 min	6 min	6 min
Rescue medication	N/A	Additional opioid (1.5 mg piritramide)	> VAS 4 8 mcg/kg hydromorphone every 2 hours	> VAS 4 8 mcg/kg hydromorphone every 2 hours
Routine analgesia in both arms	N/A	1 mg/kg diclofenac IV every 8 hours until POD 4	N/A	Ketorolac 0.5 mg/kg (max. 30 mg) every 6 hr for the first 96 hours post-op -> oral ibuprofen 10mg/kg, max. 600mg every 6hours
Rescue medication in both arms	N/A	> VAS 4 15 mg/kg acetaminophen IV (max. 4 times a day)	N/A	Oxycodone 0.05 to 0.15 mg/kg (max. 10 mg) every 3 hours
IV PCA conversion of epidural arm	N/A	0	6 (11%, Epidural catheter insertion failure) 6 (11%, within 24 hr, inadequate analgesia) 7 (13%, after removal epidural catheter, due to severe pain)	3 (9%, Epidural catheter insertion failure) 9 (28%, inadequate analgesia)

T, Thoracic; N/A, not available; max, maximum; POD, postoperative day; VAS, visual analogue scale