

Conclusions Results of our study suggest that combined general anaesthesia with truncal blocks such as TAP or QL for appendectomy in children may lengthen operative time, reduce the needs in analgesics, but do not effect on general outcomes.

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THE IMPACT OF INTRAVENOUS LIDOCAINE IN CHILDREN AND YOUNG PEOPLE UNDERGOING SPINAL FUSION SURGERY: THE EXPERIENCE IN A UK SPECIALIST CHILDREN'S HOSPITAL

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Background and Aims The use of intravenous lidocaine therapy (IVLT) improves pain outcomes in certain adult populations, however, little evidence exists in paediatric populations. We aim to evaluate its impact in patients with adolescents idiopathic scoliosis(AIS) undergoing primary posterior spinal instrumentation and fusion (PSIF).

Methods ASA1 and ASA2 patients over 12-years-old undergoing PSIF surgery for AIS between January 2017 and December 2020 were reviewed retrospectively. Demographic data, anaesthetic and pain management were evaluated alongside postoperative outcome measures.

This service evaluation was deemed no to require ethical approval (http://www.hra-decisiontools.org.uk/research/docs/DefiningResearchTable_Oct2017-1.pdf) by our local clinical governance committee (Audit No. 6351)

Results 162 patients with a median age of 15.2(IQR:13.6–16.5 [range 11.4–19.2])years underwent PSIF for AIS. 33/162 (20.4%) were male and 129/162(79.6%) female. 73/162 (45.1%) received IVLT at a median infusion-rate of 1.8(IQR: 1.5–1.9 [range 1.1–2.0])mg/kg/hr. These patients required significantly less fentanyl: intraoperatively (p=0.0182,95% CI=0.1–1.3), on day-1 (p=0.0032;95%CI=1.6–7.6) and day-2 (p=0.0104;95%CI=0.8–6.5 (see table 1); reported similar/lower pain scores (day 1: p=0.0494; 95%CI 0.0–0.8) and attained rehabilitation goals in similar timeframes.

Conclusions We observed the use of intraoperative IVLT to be associated with a significant reduction in early opiate requirements in paediatric PSIF, suggesting patients may benefit from earlier conversion from intravenous to oral opiates. This change has been implemented within our local Enhanced Recovery After Surgery Programme to facilitate earlier mobilization and discharge. Our patients reported similar levels of comfort and attained their rehabilitation goals in a similar timeframe. Further review and study is required to determine the optimal components and dosing within paediatric PSF ERAS programmes.

Peripheral nerve blocks

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IPACK AND ADDUCTOR CANAL BLOCK VS PERIARTICULAR INJECTION; ENHANCES POSTOPERATIVE PAIN CONTROL IN ANTERIOR CRUCIATE LIGAMENT (ACL) REPAIR: A RANDOMIZED CONTROLLED TRIAL

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Background and Aims Motor-sparing peripheral nerve blocks, such as the infiltration between the popliteal artery and capsule of the knee (IPACK) and the adductor canal block (ACB), may augment PAI in multimodal analgesic pathways for knee surgery, but supporting literature remains rare. We hypothesized that ACB and IPACK would lower pain on ambulation on postoperative day (POD) 1 compared to PAI alone.

Methods This triple-blinded randomized controlled trial included 50 patients undergoing ACL repair. Patients either received (1) a PAI (control group, n = 26) or (2) an iPACK with an ACB (intervention group, n = 24). The primary outcome was pain on ambulation on POD 1. Secondary outcomes included numeric rating scale (NRS) pain scores, patient satisfaction, and opioid consumption.

Results The intervention group reported significantly lower NRS pain scores on ambulation than the control group on POD 1(3.3 [2.7 to 4.0]; P <0.001). In addition, NRS pain scores on ambulation on POD 0 (3.5 [2.7 to 4.3]; P <0.001) and POD 2 (1.0 [1.0 to 1.9]; P =0.033) were significantly lower. Patients in the intervention group were more satisfied, had less opioid consumption (P =0.005, PACU, P =0.028, POD 0), less intravenous opioids (P <0.001), and reduced need for intravenous patient-controlled analgesia (P =0.037).

Conclusions The combination of iPACK to ACB significantly improves analgesia and reduces opioid consumption after ACL repair compared to PAI alone. This study strongly supports iPACK and ACB use within a multimodal analgesic pathway.

Abstract 134 Table 1 Outcomes and characteristics of 45 patients undergoing PSIF

	IVLT Group n = 72	Non-IVLT Group n = 69	P-Value
Operative Time and Room Scores			
Intraop + PACU Fentanyl (µg/kg)	5.8 [IQR: 2.5-8.8] (range: 0-8.8)	6.7 [IQR: 3.3-9.8] (range: 0-11.2)	p=0.0182
Day 1 Fentanyl Consumption (µg/kg)	24.1 [IQR: 13.8-35.0] (range: 0-70)	26.7 [IQR: 20.2-34.8] (range: 0-70)	p=0.0032
Day 2 Fentanyl Consumption (µg/kg)	23.1 [IQR: 7.2-35.8] (range: 0-45)	27.8 [IQR: 11.4-33.3] (range: 0-45)	p=0.0104
IV + O2 Postday 1 (litres)	62.0 [IQR: 24.8-82.8] (range: 0-115)	66.1 [IQR: 29-87] (range: 0-115)	p=0.0084
Duration of Fentanyl PCA (hours)	43.8 [IQR: 40-48.0] (range: 13.8-60.0)	40.8 [IQR: 40-42.8] (range: 21.0-55.0)	p=0.0409
Average Pain Score Day 1	2.1 [IQR: 1.5-2.7] (range: 0-5)	2.0 [IQR: 1.9-2.7] (range: 0-5)	p=0.0494
Average Pain Score Day 2	1.8 [IQR: 1.1-2.7] (range: 0-5)	1.9 [IQR: 1.4-2.8] (range: 0-5)	p=0.0332
Baseline Patient Characteristics			
Age (years)	15.1 [IQR: 13.5-16.2] (range: 11.2-19.2)	15.4 [IQR: 13.7-16.5] (range: 11.4-19.2)	p=0.1231
Gender			p=0.2183
Female	54/72 (75.0%)	54/69 (78.3%)	
Male	18/72 (25.0%)	15/69 (21.7%)	
ASA 1	54/72 (75.0%)	50/69 (72.4%)	p=0.9905
ASA 2	18/72 (25.0%)	19/69 (27.6%)	
Number of Spinal Levels	32-308; 10/18	32-308; 10/18	p=0.9996
Revised	range: 0-180	range: 0-180	p=0.0217
Adjusted Opioid Use			
Intraoperative Magnitude (µg/kg)	64.0 [IQR: 50-80] (range: 0-140)	66 [IQR: 67-87] (range: 0-140)	p=0.2444
Intraoperative Opioid Use (µg/kg)	1.3 [IQR: 0.8-2.3] (range: 0.0-5.0)	0.9 [IQR: 0.3-2.0] (range: 0.0-5.0)	p=0.0002
Postoperative Opioid Use (µg/kg)	0.4 [IQR: 0.0-0.9] (range: 0.0-2.0)	0.5 [IQR: 0.0-0.9] (range: 0.0-2.0)	p=0.3804
Post-operative Consumption (litres of Morphine from 200mg)	33/72 (45.8%)	30/69 (43.5%)	p=0.9989
Operative Reported Side Effects			
POV in PACU	0/72 (0.0%)	0/69 (0.0%)	p=0.5108
Day 1-POV	34/72 (47.2%)	31/69 (44.9%)	p=0.4178
Day 2-POV	22/72 (30.6%)	21/69 (30.4%)	p=0.9905
Postoperative Outcomes			
Length of stay (days)	3 [IQR: 4-6] (range: 2-8)	3 [IQR: 4-6] (range: 2-8)	p=0.1623
Time to Walking (days)	3 [IQR: 3-4] (range: 1-5)	3 [IQR: 3-4] (range: 1-5)	p=0.4794
Time to Painless (days)	3 [IQR: 4-7] (range: 2-10)	3 [IQR: 4-7] (range: 2-10)	p=0.1709