Abstract B430 Table 1

Table 1. Demographics and Risk Factors for Surgical Treatment after Fractures

	Non-Surgical	Surgical	Odds Ratio 95% CI (Ref=non-surgical)*	p value
N (%)	311,615 (95.6)	14,238 (4.4)		
Age group				
0-5	34,107 (10.9)	1055 (7.4)	reference	
6-12	131,294 (42.1)	3639 (25.6)	1.15 (1.07, 1.24)	<.001
13-18	113,764 (36.5)	6521 (45.8)	2.11 (1.97, 2.26)	<.001
19-21	32,450 (10.4)	3023 (21.2)	3.38 (3.14, 3.64)	<.001
Gender				
Female	133,429 (42.8)	5242 (36.8)	reference	
Male	178,186 (57.2)	8996 (63.2)	1.2 (1.16, 1.25)	<.001
Deyo Index				
0	273,396 (87.7)	12182 (85.6)	reference	
1+	38,219 (12.3)	2056 (14.4)	1.18 (1.12, 1.24)	<.001
Obesity				
No	298,144 (95.7)	13,402 (94.1)	reference	
Yes	13471 (4.3)	836 (5.9)	1.22 (1.13, 1.31)	<.001
Opioid Naïve				
No	21016 (6.7)	1340 (9.4)	1.07 (1, 1.13)	
Yes	290599 (93.3)	12898 (90.6)	reference	0.038
History of taking anti-anxiety or anti-depressant medication				
No	303295 (97.3)	13738 (96.5)	reference	
Yes	8852 (2.8)	543 (3.8)	1.02 (0.93, 1.11)	0.746
Fracture location				
Hand and wrist	107003 (34.3)	4279 (30.1)	reference	
Foot and ankle	84766 (27.2)	3317 (23.3)	1.02 (0.97, 1.07)	0.482
Forearm	90309 (29.0)	2952 (20.7)	1.04 (0.99, 1.09)	0.143
Lower leg	29537 (9.5)	3690 (25.9)	3.24 (3.09, 3.39)	<.001
Region				
Northeast	61746 (19.8)	2397 (16.8)	reference	
North Central	67301 (21.6)	3704 (26.0)	1.33 (1.26, 1.41)	<.001
South	130358 (41.8)	5950 (41.8)	1.1 (1.04, 1.16)	0.001
West	50726 (16.3)	2133 (15.0)	1.07 (1, 1.13)	0.047
Unknown	1484 (0.5)	54 (0.4)	0.86 (0.65, 1.14)	0.296
Income Category				
Unknown	55902 (17.9)	2791 (19.6)	1.17 (1.1, 1.24)	<.001
<$58,000	59424 (19.1)	2916 (20.5)	1.13 (1.06, 1.2)	0.002
$58,000-$76,000	128868 (41.4)	5932 (41.7)	1.09 (1.03, 1.15)	<.001
>$76,000	67421 (21.6)	2599 (18.3)	reference	

*A multivariable logistic regression model was created to identify risk factors for surgical treatment after fracture including age, gender, Deyo comorbidity burden, obesity, history opioid use, history of anti-depressant or anti-anxiety medication use, fracture location, region, and household income level.

Conclusions Our study demonstrates a number of demographic variables that are independently associated with the use of a surgical approach to repair pediatric fractures. The significance of a number of these findings could highlight the stark differences and disparities in fracture care for pediatric patients in the United States.

B431 LATERAL ERECTOR SPINAE PLANE BLOCK FOR LENGTHENING OF GROWING SPINAL RODS AFTER PREVIOUS SPINAL INSTRUMENTATION IN CHILDREN. CASE SERIES

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Background and Aims Ultrasound guided erector spinae plane block (ESPB) is very effective means of pain relief for spinal surgeries. Some pediatric patients need their spinal surgeries at earlier age, and due to further growth, they need various additional procedures, most often, lengthening of metal rods. These instrumentations make the visualization of a transversus process very difficult or impossible. Since June 2019 we have been using more lateral approach for this successful nerve blockade, where we used a rib as a landmark structure instead of transversus process. We have called this block Lateral ESPB (LESPB).

Methods After approval from the local ethical committee, we identified medical records of patients who received LESPB since June 2019. On one side we performed Lateral ESPB and we injected local anaesthetic more laterally where shadow of the rib could be seen. On contralateral side, where transversus process could be visible we proceed with conventional ESPB.

Results We found 6 patients who fulfilled our criteria. Pain scores in recovery 1 and 6 hours after a surgery were 0 except one patient who had pains score 5, 1 hour after surgery, but no intervention was needed. No opioids were used in first 6 hours in any patient and 3 out of 6 patients (50%) received no opiods postoperatively.

Conclusions From our very limited experience we can conclude that Lateral ESPB is valuable block which can provide significant pain relief post spinal instrumentation where transversus process cannot be visualised by ultrasound.

B432 OPIOID SPARING EFFECT OF PENG BLOCK IN OPEN REDUCTION OF PEDIATRIC DEVELOPMENTAL DYSPLASIA OF THE HIP: A CASE SERIES

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Background and Aims Developmental dysplasia of the hip (DDH) is a frequent problem that is treated with open hip surgery, which is associated with severe postoperative pain. Caudal and lumbar plexus blocks are the most common regional blocks, which are advanced techniques (1). Pericapusllar nerve group (PENG) block is a novel block that targets articular branches of the accessory obturator nerve and femoral nerve, which has been shown to have a major role in the innervation of the hip capsule (2). In this case series, we describe our experience with the PENG block in 5 pediatric patients with DDH.

Methods Five patients aged between 10 and 20 months who scheduled for DDH surgery was taken to operating theatre. PENG block was performed following general anesthesia induction. Using linear probe, 50 mm needle was inserted from lateral to medial with an in-plane approach, and 0.5 $mL.kg^{-1}$ 0.25% bupivacaine was injected in the space between the psoas tendon and the iliopubic eminence. At the end of the surgery, the patients received 15 $mg.kg^{-1}$iv paracetamol, and FLACC score was used for assessing the pain.

Results All patients' FLACC scores were between 0 and 2 in the first 24 h period. Two patients were treated with paracetamol at postoperative 8th and 10th h. No other analgesic drug was used during the first 24 h.

Conclusions This case series showed that PENG block provided effective postoperative analgesia and provided pain-free period after DDH surgery without the need of opioids. However, we think that future randomized controlled trials are needed.

B433 PEDIATRIC ANESTHESIA PRACTICES DURING THE COVID-19 PANDEMIC

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Background and Aims The onset of the coronavirus 2019 (COVID-19) pandemic brought together the American Society

of Regional Anesthesia and Pain Medicine (ASRA) and the European Society of Regional Anaesthesia and Pain Therapy (ESRA) to release a joint statement on anesthesia use (1). Their statement included a recommendation to use regional anesthesia whenever possible to mitigate the risk associated with aerosolizing procedures. We sought to examine the utilization of anesthesia in pediatric patients undergoing a surgical procedure for fracture or ligament repair before and during COVID-19.

Methods This study is approved by Hospital for Special Surgery Institutional Review Board (IRB# 2016–436). We used the Premier Healthcare Database to identify pediatric patients undergoing a surgical intervention for fractures or ligament repair before COVID-19 (March-June 2019) and during (March-June 2020). We compared general, regional, and combined general-regional use before and during COVID-19.

Results We identified 6,415 patients undergoing a surgical procedure for fracture or ligament repair before and during COVID-19. After exclusions for unknown anesthesia use, 3,052 patients were included in our cohort with 82.9% (n=2,530) of patients undergoing a procedure under general anesthesia, 6.0% (n=182) under regional anesthesia, and 11.1% (n=340) under combined general-regional anesthesia. There was no difference in the type of anesthesia used before and during COVID-19 (p=0.053, Table 1).

Conclusions We did not find a significant difference in anesthesia use before and during COVID-19 among pediatric patients undergoing a surgical procedure. The significance of these findings highlights how societal recommendations and historical precedent may not influence pediatric anesthesia practice models.

B434 THE ROLE OF ERECTOR SPINAE PLANE BLOCK IN THE POST-OPEN ABDOMINAL SURGERY CARE OF A PAEDIATRIC VACTERL PATIENT

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Background and Aims VACTERL syndrome is an acronym for congenital vertebral, anal, cardiovascular, tracheo-esophageal, renal and limb defects (at least three needed for diagnosis). Anaesthetic care can be challenging.

The erector spinae plane block (ESPB) can provide abdominal somatic and visceral analgesia. We describe its successful use to provide effective postoperative analgesia and circumvent limitations after open supraumbilical abdominal surgery in a poorly developed infant.

Methods A 5-months-old, 4kg, with VACTERL, presents for Nissen fundoplication and gastrostomy. During her 180-day hospital stay she underwent primary esophageal atresia repair, colostomy, tracheostomy, had multiple respiratory complications, three mechanical ventilation cycles, and received long-term opioid therapy showing withdrawal symptoms after discontinuation.

After anaesthesia induction, surgery started laparoscopically but due to patient's intolerance to pneumoperitoneum was converted to a midline laparotomy. Intraoperatively, IV fentanyl 10mcg, paracetamol 60mg and morphine 0,2mg were administered. Endmost, ultrasound-guided bilateral T7-T8 single shot ESPB (3+3 ml ropivacaine 0,15%) was performed. For postoperative pain management we elected IV paracetamol 60mg 6/6h and rescue morphine.

Results Patient was extubated uneventfully.

Based on comfort level, stable vital signs, limited oxygen requirement and absent need for rescue medication, she was safely discharged to the ward, obviating the need for ICU.

FLACC score was used to assess pain at 0–3-6–18 hours and was 0–3/10 over time.

No rescue opioid was administered. Parents were satisfied and no postoperative complications were observed.

Conclusions ESPB appears to be useful for pain management purposes in upper abdominal surgeries in pediatric patients with pulmonary impairment and pain treatment concerns, with optimal safety profile and sensitive coverage.

B435 DOES NEUROSTIMULATION IMPROVE EFFICACY FOR ULTRASOUND-GUIDED TRANSPERINEAL PUDENDAL NERVE BLOCK IN CHILDREN?: A RANDOMISED CONTROLLED TRIAL

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Background and Aims Ultrasound (US)-guided trans-perineal pudendal nerve block (TPNB) is a novel regional anesthesia technique for pediatric perineal surgery. However, a non-specific needle target under ultrasonography leads to high failure rate and affects analgesic outcomes. This two-center randomized trial aims to compare the analgesic effects of US in combination with neurostimulation (NS) versus US alone for TPNB. We hypothesized that addition of NS enhances the efficacy of US-guided TPNB.

Methods After approval by the hospital's ethics committee (ANE-256105992), forty children undergoing circumcision were randomly allocated to US-NS (n =20) or US-alone (n =20) group. Both groups received TPNB with 0.2 ml/kg/side of 0.25% bupivacaine after induction of general anesthesia. Primary outcome was the proportion of patients receiving intravenous fentanyl in post-anesthesia care unit (PACU). Secondary outcomes were block performance data, postoperative oral acetaminophen and pain intensity within 24 hours, success rate, block-related complications including vascular and rectal punctures, and parental satisfaction.

Results Eleven percent of patients in US-alone group received fentanyl, while none of those in US-NS group required analgesics in PACU (p=0.230). FLACC score at 30 minutes in PACU was significantly higher in US-alone group (p=0.032). When NS was combined, a median (IQR) duration of block performance was longer (7.0 (5.8–8.1) vs. 3.2 (2.5–3.5) minutes, p<0.001). No significant difference was observed between the two groups in postoperative acetaminophen consumption, pain scores at ward, block success, block-related complications, and parental satisfaction.

Conclusions TPNB guided by US alone or in combination with neurostimulation shows similar analgesic efficacy within the first 24 hours after pediatric circumcision.