no questions where HealthRota was inferior to other rotas. The biggest improvements were seen with 'Requesting Leave', 'Access the rota 24 hours a day' and 'Feeling of Ownership'. There were many positive comments in the open section including HealthRota was 'Much less Stressful', 'Absolutely fantastic' and 'A breath of fresh air'.

Conclusions Despite COVID-19 impacting on the junior doctor experience, HealthRota still proved to be a much more popular and efficient system across all important aspects of medical rotas

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INFLIXIMAB INDUCED INTERSTITIAL LUNG DISEASE AND RESPIRATORY FAILURE: CASE REPORT OF A CHILD WITH INFLAMMATORY BOWEL DISEASE

Anna Evans, Thomas Cromarty, Benjamin Eagle, Michael Cosgrove, Amar Wahid, Atheer Abdulameer. UK

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Background Infliximab is a chimeric anti-tumour necrosis factor-alpha (anti-TNFα) monoclonal antibody that has been used safely in the management of Inflammatory Bowel Disease (IBD) for over 20 years, recommended for use in paediatrics by the National Institute for Clinical Excellence (NICE) since 2010. Drug-induced interstitial lung disease (DIILD) secondary to Infliximab has been described as a rare complication in adult literature with variable outcomes.

Objectives We present the first reported case of life-threatening respiratory disease in a 13 year old patient receiving Infliximab for IBD.

Methods The patient was diagnosed with unclassified IBD (IBDU) aged 11 years, when he presented with colitis. Following steroid induction, maintenance treatment with Azathioprine was not tolerated and response to Mercaptopurine was inadequate. There was complete resolution of symptoms after the third dose of Infliximab.

Following the fourth dose of Infliximab the patient presented with respiratory symptoms which progressed rapidly, requiring Paediatric Intensive Care Unit (PICU) admission. Treatment was directed at a presumed infectious cause. CRP was raised and the patient became febrile, however extensive microbiological investigations were negative.

On day 8 of admission Methylprednisolone was started. Clinical improvement was rapid and allowed weaning of organ support. At day 14 Methylprednisolone dose was reduced by half and antibiotics were discontinued. Rapid deterioration ensued, therefore Methylprednisolone was increased.

After 5 weeks of intensive organ support and 2 mg/kg/day of methylprednisolone, the patient improved and steroids were cautiously weaned. Respiratory symptoms had completely resolved 8 weeks after last receiving Infliximab.

Subsequently he had a recurrence of symptoms with colitis confirmed on colonoscopy, and histology more in keeping with Crohn's disease. He did not respond to 5ASA therapy. After MDT discussion he was treated with Vedolizumab (a gut-specific anti-integrin). His colitis settled, with no adverse reaction to the alternative biologic.

Results Studies into DIILD from biologic therapies are largely from Rheumatoid Arthritis (RA) cohorts, and many subjects had pre-existing ILD. Known risk factors for the development of, and mortality from DIILD are not relevant to this case. A diagnosis of DIILD secondary to Infliximab was concluded

based on clinical course, lack of alternative diagnoses after thorough investigation, and multi-disciplinary discussions.

Withdrawal of the causative drug is the universally accepted treatment. Steroids are the most frequent drug treatment used but optimal dosing, duration and patient group who may benefit is unclear. Our case supports the use of high dose steroids in severely unwell patients but limited evidence precludes recommendation of other drug treatments.

Conclusions We believe this is the first case report of a child with DIILD secondary to Infliximab. Withdrawal of Infliximab and treatment with high dose steroids during the period of drug clearance was life-saving. Identification of those at risk of DIILD and early detection of the disease is challenging; there are many confounding factors and DIILD appears to be very rare in paediatrics. We would advocate further research to develop validated biomarkers for early detection of DIILD. Reporting of adverse events in post-marketing era remains integral. Vedolizumab may be an appropriate alternative for patients who have adverse reactions to Infliximab.

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THE OUTCOME OF PDA LIGATION BY MINI-THORACOTOMY IN PREMATURE NEONATES: A SINGLE HOSPITAL EXPERIENCE

Zainab Irshad, Noor Alhashimi Alhashimi, Saeed Al Hindi. Bahrain

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Background Patent ductus arteriosus (PDA) is a common complication observed in the premature infant; its management being a controversial issue. The lack of robust evidence of benefit or harms of available treatment options, necessitate the need to balance them out against the likelihood of spontaneous duct constriction, which occurs in approximately a third of extremely premature neonates. Despite the controversy regarding the optimal management of PDA, nearly 70% of preterm infants (less than 28 weeks of gestation) will receive either medical or surgical treatment. The rationale behind this is to decrease the likelihood of developing morbidities associated with prematurity and persistent PDA. These include intraventricular hemorrhage (IVH), bronchopulmonary dysplasia, necrotizing enterocolitis (NEC) and increased mortality.

Various thoracotomy practices have been employed for occlusion of PDA which are not amenable to medical management. Success rates of surgical ligation are reported to be high but it has been associated with significant operative complications. In this study, we assess survival outcomes and operative complications associated with ligation.

Objectives This prospective study focuses on the closure of PDA by mini-thoracotomy in our institution. We report our preliminary experience of using this approach in small premature infants and determining survival outcomes in relation to factors such as gender, birth weight, age, and type of ventilation used intra-operatively.

Methods Between January 2004 and December 2012, 52 consecutive premature infants with an echocardiographic diagnosis of isolated PDA, which are not amenable to medical treatment, were included. Those with chromosomal abnormalities, major cardiac congenital anomalies aside from septal defects, and infants who did not receive mechanical ventilation in the first week of life were excluded. The median gestational age was 28 weeks and the median gestational weight at surgery was 705 g. The median PDA size was 3.8 mm, ranging from

1.6 to 5 mm. Twenty-nine patients were given non-selective ventilation and twenty-three were anesthetized using selective right-lung ventilation using a 2-F balloon catheter for arterial embolectomy. A left lateral mini-thoracotomy was performed in all infants and PDA closure achieved by double ligation using zero silk sutures.

Results The median operative time and mean length of hospital stay were 45 minutes and 90 days, respectively. No major hemorrhage requiring blood transfusion occurred during the surgery. The survival rate until hospital discharge was 88.5%. There were no mortalities associated with the surgery itself. Six (11.5%) neonates died postoperatively because of prematurity (P-value=1.000). Pneumonia and atelectasis were among the few complications encountered post ligation. An association was recognized between ventilation and surgical complications; that is neonates who underwent selective right ventilation did not experience any of the complications mentioned above in comparison to those who were put under non-selective ventilation (P-value <0.001).

Conclusions Closure of PDA by double ligation via a left mini-thoracotomy in small premature infants proved to be safe and effective in providing pediatric surgeons adequate exposure within confined and delicate anatomic spaces. No procedure related mortalities or major complications were encountered. It is a useful option in neonates with failed medical management of PDA especially in preemies where performing VATS is challenging.

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TO COMPARE EFFECTIVENESS OF INFRARED SPECTROSCOPIC TECHNOLOGY WITH CONVENTIONAL PERIPHERAL VENOUS ACCESS IN CHILDREN: RANDOMIZED CONTROL STUDY

Borra Ranganath, Raj Dhar Dutt, Yogendra Singh Varma, Ajay Gaur. *India*

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Background Although considered to be a routine minor intervention, intravenous cannulation can often be difficult and potentially painful. The implications maybe more pronounced in younger children. Otica pediatric LED uses near infra-red light to enhance the visibility of veins and thus to negotiate difficult venous access. In our study we hoped to explore the utility of NEAR INFRARED TECHNOLOGY in children with difficult peripheral venous access.

Objectives To assess the superiority of near infra-red spectroscopic technology over conventional vein viewing techniques in children with difficult peripheral venous access.

Methods From November 2018 to August 2020, 509 children aged 3 to 36 months satisfying the inclusion criteria for difficult cannulation (based on DIVA score) were included. Randomization was attempted by employing Otica pediatric LED (intervention group) and conventional methods (control group) every alternate fortnightly by the same set of residents. The median no. of pricks before successful cannulation per child in each group, and the proportion of first attempt success rate in each group were the primary end points.

Results The median no. of attempts was lower in the intervention group (1; IQR 1–2) than in the control group (2; IQR 1–3, $p < 0.001$). Proportion of cannulations successful in the first attempt was 64% (136 of 211) in the intervention group and 40% (119 out of 298) in the control group ($p < 0.001$). From the sub-group analysis we found significant difference

Abstract 132 Table 1 Proportion of success at first attempt cannulation (Age wise)

Age	Conventional	Intervention	Chi square P value
3 months to 6 months	41/115(36%)	56/84(67%)	0.001*
7 months to 12 months	29/83(35%)	32/52(63%)	0.001*
13 months to 18 months	27/53(51%)	26/40(65%)	0.175
19 months to 24 months	6/10(60%)	7/11(64%)	0.864
25 months to 30 months	8/16(50%)	4/7(58%)	0.752
31 months to 36 months	8/21(38%)	10/16(63%)	0.141

Abstract 132 Table 2 Median number of pricks required to successfully cannulate (Nutrition wise)

Weight/height	Conventional	Intervention	P value
	Median (IQR) N	Median (IQR) N	
<-3 Z SCORE	2(1–3) 48/102	1(1–2) 45/65	0.002*
Severe acute Malnutrition			
-3 TO -2 Z Moderate	2(1–3) 26/56	1(1–2) 26/42	0.112
Acute Malnutrition			
-2 TO -1 Z SCORE	2(1–3) 19/50	1(1–2) 22/33	0.170
-1 TO MEDIAN	2(1–3) 18/51	1(1–2) 26/33	0.01*
> MEDIAN	2(1–2) 08/39	2(1–3) 17/37	0.027*

between both the groups when analysed across the age-groups as well as the nutritional status. An interesting finding in the trial is that the advantage with the NIR device was significant in children requiring more than one instance of cannulation (those that are not IV line naive).

Conclusions In our study we found a significant clinical advantage with the use of Otica pediatric LED consistent across the sub groups. However to vouch for any routine recommendation will require a larger and perhaps a multicenter study to begin with. While the busy and shuffling schedule of a residency inherently weighs down on any interventional study, the results of our study calls for an optimistic investment into the research in near infrared technology for standard cannulation procedures.

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REDUCING BLOOD TESTING IN PICU, A QUICK QI PROJECT

Fadi Maghrabia, Jo Lumsden, Santosh Sundararajan. *UK*

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Background

Introduction Critically ill children are at significant risk of repeated blood sampling for laboratory testing, which could lead to nosocomial anaemia and blood transfusions¹. We aimed to optimise blood testing and the associated costs in PICU without adversely impacting patient safety and outcome.

Objectives As part of the quality improvement initiative, a bedside guideline for common blood tests was introduced in 2014 based on a patient stratification system. We wanted to check if our practice is compliant with the guideline.