03 THE UK PAEDIATRIC LIVER TRANSPLANT PROGRAMME DURING THE COVID-19 PANDEMIC

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Introduction The UK has been severely affected by the COVID-19 pandemic. The impact on the adult population has been disproportionately higher when compared to children with consequent challenges to organ donation and liver transplantation (LT). Across the three UK paediatric liver centres there has only been a very small number of patients who tested positive for COVID-19 and all made a speedy and full recovery. We report here the response during the pandemic across the 3 paediatric LT centres.

Methods A series of nationally agreed policy changes affecting the liver procurement, listing and transplant process were agreed during regular meetings with LT centre directors and NHSE. Actions at a local and national level were agreed to protect and maintain the paediatric LT programmes.

Data were collected from 27/03/20 until 26/11/20 and compared with same time period for the years 2016–19.

Results During the study period, there was a significant reduction in the adult population in the mean number of weekly liver offers, donors and LTs compared to before the pandemic with signs of recovery between the 1st and 2nd UK lockdown periods (figure 1). More specifically the number of livers offered nationally was reduced from an average 30–40/week to only <10/week during the 1st wave in the March-April period. The number of children on the LT list during the study period across all 3 centres was 74 in total with 17 (23%) super-urgent and 57(77%) electives, which was comparable to previous years.

Overall, 65–80 paediatric LTs are performed annually across the UK's 3 paediatric centres.

From March-November 2020 there were 58(82%) elective and 13(18%) super urgent (acute liver failure & hepatoblastoma) paediatric LTs performed.

Donor Brain Dead (DBD) and Donor Cardiac Dead (DCDC) LTs were 54(76%) and 3(4%), respectively. Living related LT (LRLT) programme was sustained comprising 20% of LTs performed.

The number of paediatric LTs performed during the pandemic was comparable to those performed yearly since 2016. The number of LT per paediatric centre for King's College Hospital (KCH), Birmingham Children's Hospital (BCH) and Leeds Liver Unit were 40 (56%), 15(21%) and 16(23%), respectively with excellent outcome. A 15-year-old girl from KCH diagnosed with Wilson disease presented with liver failure and became COVID-19 positive whilst listed. She underwent LT soon after becoming COVID-19 negative. No perioperative mortality was reported with excellent outcome so far in all.

Conclusion The current COVID-19 pandemic had a significant impact on the UK adult LT programme. The paediatric programme LT was preserved despite a decrease in organ offering and retrieval nationally plus limitations on adult intensive care resources at a regional level. Overall, paediatric LT outcome remained very good.

04 GOSH-UCLH TRANSITION IN NEUROGASTROENTEROLOGY AND MOTILITY: EMBRACING READY STEADY GO HELLO

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Introduction/Background In the last decade, Neurogastroenterology & Motility (N&M) has become a major clinical speciality in both paediatric and adult gastroenterology, encompassing gastrointestinal (GI) conditions from classic motility disorders, such as achalasia and intestinal pseudo-obstruction, to functional GI disorders (FGID). The latter represents one of the most challenging and common groups of disorders managed by both primary care practitioners and GI specialists. Appropriate transition is particularly challenging due to the complexity of this group of patients and a holistic approach, including dietetic, psychology, psychiatry, social work, physiotherapy and occupational therapy, is characteristically required. In the last year, a formal transition pathway has been developed between GOSH and UCLH N&M services.

Aim We aimed to review the clinical features and the complex needs of a group of young people transitioned from a paediatric to adult N&M.

Method All patients aged 13–24 transitioned to the UCLH N&M service over a period of 6 months were retrospectively reviewed. Demographic data, diagnosis, diet, biopsychosocial complexities, including multiple speciality involvement, polypharmacy, and known psychiatric and/or neurodevelopmental disorders were reported.

Results Ninety-two patients (70.7% Female) under the neurogastroenterology adolescent and young-adult service were included into the analysis, of which 72.8% were 13–18 years of age, 23.9% 19–22 years of age and 3.3% 22–24 years of age. Twenty-seven patients (29.3%) were diagnosed with an underlying motility disorders, 59 (64.1%) with FGID and 8 (8.7%) with GI-allergy. The majority of patients (80.5%) were under one or more additional medical specialities, with 28.3% under 3 or more medical specialities. Polypharmacy was common within this cohort, with 61% of patients being on 3 or more medications, whilst only 1.1% of patients required no medication to manage the symptoms. The majority of patients (56.5%) had mental health or developmental needs, such as anxiety (25%), depression (12%), eating disorders (5.4%), and learning difficulties (14.1%). Psychological interventions were necessary in 69% of the patients, whilst dietetic interventions in 76% of patients.

Summary/Conclusion Our study confirms the need for multidisciplinary support from the specialist adolescent medicine team to provide medical and psychological care when highly demanding complex patients are transitioned between a paediatric and an adult N&M services. Our data strongly supports a specialist adolescent transition hub model to ensure the delivery of developmentally appropriate healthcare, which has been shown to improve long-term health outcomes for young people with complex conditions. Although N&M expertise at

GOSH lies in caring for patients up to 18 years, adolescent expertise is limited, as it is nationally. Conversely, UCLH has a unique expertise in complex and specialist adolescent care, which could assist the transition planning for those children with the most complex needs. Based on our data, children with motility and functional-GI disorders commonly require a transition plan spanning multiple adult services and require the expertise of the adolescent MDT including psychology, social work, youth work, psychiatry, physiotherapy and occupational therapy. A commissioned joint transition service between GOSH and UCLH would facilitate best practice and provide an exemplar of clinical care for young people with complex health problems.

05 THE PREVALENCE OF COW'S MILK PROTEIN ALLERGY IN INFANTS WITH GASTROSCHISIS AND INTESTINAL FAILURE TYPE 2 AND 3

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Introduction The prevalence of cow's milk protein allergy (CMPA) in infants with gastroschisis has been reported as high as 45%, which is significantly higher than in the general infant population (0.5–1% of breast-fed babies and 5–7% in formula-fed babies). We aimed to define the prevalence of CMPA in infants with gastroschisis and type 2 or 3 intestinal failure (IF) and compare this to other groups of infants with type 2 or 3 IF.

Methods We obtained the pharmacy records of PN prescription lasting more than 28 days (i.e. IF type 2 and 3) for infants born between July 2015 and June 2020 in our tertiary intestinal rehabilitation centre. We only included infants presenting in the first year of life with type 2 or 3 IF related to a gastrointestinal disorder, other than enteropathies. We recorded the underlying cause of IF and the number of patients clinically diagnosed with CMPA. The diagnosis of CMPA was made by the clinical team on the basis of gastrointestinal symptoms, presence of macroscopic blood in the stools and lack of any other alternative diagnosis with symptom resolution after initiation of a hydrolysed or amino acid-based formula. We then obtained the feeding records of the patients and noted the number of infants on a hydrolysed and amino acid-based formula during their hospitalisation and at the latest dietetic follow up.

Results Out of 112 infants, 23 were diagnosed with gastroschisis and 29 with necrotising enterocolitis (NEC); 25/29 surgically managed. CMPA was diagnosed in 3/23 (13%) infants with gastroschisis, 5/25 (20%) of infants with surgically managed NEC and 5/60 (8%) of infants with other causes of IF type 2 and 3. Out of 23 patients with gastroschisis, only one was discharge home on PN with no concerns of CMPA. Out of the total 112 infants, 98 presented with IF type 2 and only 7 (7%) were also diagnosed with CMPA, while 14 were discharged on home PN with 6 (43%) also diagnosed with CMPA – table 1. An amino acid-based formula was trialled in 30/112 (27%) infants at some point during their hospitalisation while a hydrolysed formula was used in 54/112 (48%) infants with type 2 and 3 IF, in order to treat fat and sugar malabsorption, with 57% of children continuing to take a hydrolysed formula at the last recorded dietetic follow up. Three out of the 13 children with CMPA (2 with gastroschisis) have tolerated a dairy containing diet later on.

Abstract 05 Table 1

	No of patients	CMPA	IF type 3	CMPA & IF type 3
Gastroschisis	23	3	1	0
Surgically managed NEC	25	5	6	2
Medically managed NEC	4	0	0	0
Intestinal atresia	18	3	3	3
Malrotation	10	1	2	1
Hirschprung's disease	3	1	1	0
Other	29	0	1	
Total	112	13	14	6

Conclusions The prevalence of CMPA in infants with gastroschisis and type 2 or 3 IF is much lower than that previously reported. CMPA is most prevalent in infants with surgically managed NEC and IF 2 or 3 while the prevalence of CMPA in IF type 3 in general is significantly higher. The use of hydrolysed formula for the management of malabsorption may be masking the diagnosis of CMPA in children with IF type 2.

06 DELIVERY OF A NATIONAL PAEDIATRIC GASTROENTEROLOGY, HEPATOLOGY AND NUTRITION VIRTUAL TEACHING PROGRAMME DURING THE COVID-19 PANDEMIC

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Introduction At the onset of the Covid-19 pandemic, hospital educational activities were halted in order to focus on healthcare delivery and maintain social distancing. As a response to this disruption, BSPGHAN trainees set up the BSPGHAN Education Series, a twice- weekly virtual learning programme. The core objective of this programme was to deliver high quality paediatric gastroenterology, hepatology and nutrition (PGHAN) teaching during the pandemic.

In this study, we analysed the attendances and feedback received from the education series, in order to guide future directions.

Methods We reviewed the Zoom meeting attendance logs and Survey Monkey feedback forms for the BSPGHAN Education Series from April 2020 to December 2020.

Results In nine months, a total of 55 talks were delivered by 43 speakers. 23 (41.8%) sessions were gastroenterology-themed, 25 (45.4%) were hepatology-themed and 7 (12.7%) were nutrition-themed.

Thirteen paediatrics gastroenterology units (12 in the UK and 1 in the United States) and all 3 UK tertiary paediatric liver centres contributed to the talks. The highest contributing centres were Birmingham Children's Hospital (20 sessions), followed by King's College Hospital (9 sessions) and Leeds Children's Hospital (7 sessions).