G322 IV FLUIDS TO PROTECT AGAINST STEC-HUS – IMPACT OF HEALTH PROTECTION SCOTLAND GUIDELINES ON ACUTE PAEDIATRICS SERVICES

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Introduction Acute bloody diarrhoea is associated with E.Coli enterocolitis, progressing to haemolytic uraemic syndrome (STEC-HUS) in 10–15% of cases. Health Protection Scotland (HPS) guidelines recommend commencing pre-emptive IV fluids in children with acute bloody diarrhoea and high risk features until an E.Coli result is known to reduce progression and severity of STEC-HUS. The service impact of this change is unknown.

Aims

- Establish baseline annual presentation rate of children with acute bloody diarrhoea to RHC, Glasgow
- Evaluate management of children eligible for pre-emptive IV fluids prior to guideline implementation
- Estimate service impact of guideline implementation

Methods A microbiology search identified all stools sent from RHC (ED/CDU) between 1/3/18–1/3/19. Children with acute bloody diarrhoea and high risk features were identified by screening records of patients with bloody/diarrhoeal samples. Data regarding management/diagnosis was extracted. CMPI and IBD cases were excluded.

Results 55 patients had acute bloody diarrhoea (9% of 577 stool samples). 8 CMPI and 7 IBD cases were excluded. Of the remaining 40, 29 had high risk features meeting criteria for pre-emptive IV fluids. 32 had blood tests and 24 had urinalysis.

Of 29 high risk patients, 22 (76%) were admitted for an average of 2 days (excluding HUS) and 7 (24%) were not admitted. 14 (47%) received IV fluids >24 hours and 8 (28%) were discharged before 24 hours. 22 (76%) grew a bacterial pathogen (E.Coli (n=4), *Campylobacter* (n=15), *Salmonella* (n=3)) and 3 (10%) developed STEC-HUS. Mean time to stool culture result was 47.8 hours.

Of 11 without high risk features, 1 grew a bacterial pathogen (*Campylobacter*).

Conclusion In this cohort, implementing HPS guidelines would necessitate 22 additional inpatient hospital days for IV fluids, 8 additional blood tests and 16 additional urinalysis tests. High risk features appear sensitive for pathogenic bloody diarrhoea and captured all STEC-HUS/E.Coli cases.

G323 DECISION-MAKING IN NEONATAL INTESTINAL FAILURE: PALLIATIVE OR ACTIVE CARE?

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Survival rates for neonatal intestinal failure (IF) have improved significantly over the past decade, however there is no consensus for decision-making among UK paediatric subspecialists.

Aim The aim of this study was to describe health professionals' decision-making regarding palliative versus active

management in neonatal IF and to examine variation between subspecialties.

Methods An electronic survey was designed to explore several neonatal scenarios. It was sent to neonatologists, paediatric surgeons and gastroenterologists on two occasions. In addition to being asked whether they would recommend active or palliative care or allow the parents to decide; they were asked whether they would consider the treatment morally obligatory or impermissible, that is authority should be sought from the courts if there is parental disagreement with the professional opinion.

Results The survey was completed by 147 respondents of which 75 (21% were neonatologists, 26 (18%) paediatric surgeons and 26 (18% surgeons) with 20 (13%) other.

In a term baby with total gut Hirschsprung's, 81% of gastroenterologists would recommend active care (regardless of parental decision in 34.6%) compared to 46% of surgeons and 35% of neonatologists. No gastroenterologist would recommend palliative care while 23% of both neonatologists and surgeons would.

Similarly, in a 28-week gestation neonate with bilateral brain haemorrhages and IF secondary to necrotising enterocolitis (NEC) 77% of surgeons and 73% of neonatologists would recommend palliative care compared with only 27% of gastroenterologists.

For a term baby with IF secondary to volvulus, 58% of gastroenterologists estimated that she would have a five-year survival of >80% compared to 11.5% of surgeons and only 2.7% of neonatologists. Similarly, for a 26 week gestation baby with IF secondary to NEC only 11.5% of surgeons and 2.6% of neonatologists believed her 5-year survival would be >60% compared to 59% of gastroenterologists.

Conclusion Paediatric subspecialists have very different views about long-term outcomes and the appropriateness of active or palliative management in neonatal IF, with gastroenterologists being consistent more optimistic than surgeons or neonatologists. This is likely to lead to unjustified variation in counselling and choices given to parents.

G324 EXPRESSION OF NEURONES AND NEURONAL PRECURSORS IN THE TRANSITION ZONE OF SHORT SEGMENT HIRSCHSPRUNG'S DISEASE

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Aims Hirschsprung's Disease (HSCR) is a congenital disorder of dysfunctional enteric nervous system (ENS) development, resulting in distal aganglionosis of the bowel. The cellular composition of the transition zone (TZ), the region between the distal aganglionic bowel and normally innervated ganglionic bowel, is not well understood. Some children have resectional surgery in which TZ bowel is left in situ with variable effects on functional outcome. Understanding the cellular anatomy of this region may aid in understanding the aetiology of HSCR and the effects of TZ pull-through on outcome, in addition to permitting the development of safe and effective use of ENS progenitor cells as therapy. This work aimed to characterise the TZ of short segment HSCR bowel, by assessing the expression of ENS and