Aim The aim of this study was to establish if the anti-epileptic effect of Mozart music on EEGs is present in children.
Methods Forty five children aged 0-18 with EEGs showing epileptiform activity were included in the study. They were selected opportunistically, from those attending for routine EEG analysis who had epileptic EEGs. Mozart's Sonata for two pianos in D major (K448) and an age-appropriate control music were used. Epileptic EEG activity was measured in five states, each lasting 5 minutes; before Mozart music (baseline), during Mozart music, after Mozart music/before control music, during control music and after control music. The results were analysed manually.
Results A significant reduction ($p<0.0005$) in the frequency of epileptic discharges was found during listening to the Mozart music compared to the baseline. No significant difference was found between the baseline and the other three states. No significant difference was found between during listening to the Mozart music and during listening to the control music.
Conclusion This study confirms an anti-epileptic effect of Mozart music on EEG activity in children, with a significant reduction in the frequency of epileptic discharges during listening to the Mozart music compared to the baseline, which was not present when listening to the control music. This study warrants further investigation into whether this effect could be achieved with other similarly structured music to Mozart. It opens doors to investigation into the long-term use as a therapy for epilepsy and to enhance understanding of epileptogenesis. Given the large proportion of children suffering from refractory epilepsy and the financial burden of epilepsy medication, a new therapy would be welcomed.

G192 THE USE OF FAECAL CALPROTECTIN IN PAEDIATRIC INFLAMMATORY BOWEL DISEASE

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Aims To evaluate the use of faecal calprotectin (FC) in children with suspected inflammatory bowel disease (IBD) in the previous year, and to establish if the number of negative endoscopies had been minimised without missing any cases of IBD. To assess the use of FC in established paediatric IBD. To analyse the cost benefit of the test.
Methods A retrospective analysis of FC measurements carried out between 1st October 2011 and 30th September 2012. FC measurements were obtained from the biochemistry department. Following a computerised search of the departmental records the presenting complaint, endoscopy result if applicable, diagnosis of IBD or alternative diagnosis, and follow-up or discharge were recorded for each patient. Patients were divided into those who were scoped based on their FC value and those who were not. Established IBD patients who had a FC test as part of their disease management were treated as a separate group.
Results 36 patients (55%) were not scoped. All 36 had at least one symptom indicative of IBD. 25 of these had a FC value of $<50\mu g/g$. 4 of these patients had a FC result $> 200\mu g/g$. None of these patients have been diagnosed with IBD. 17 patients were scoped (26%). 3 of these patients were diagnosed with IBD. Median FC for the group that were not scoped was $30\mu g/g$ (interquartile range (IQR) 30–$760\mu g/g$), compared with $126\mu g/g$ (IQR 52 –$1{,}590\mu g/g$) in the group that were scoped. 8 patients with known IBD had a FC test when they became symptomatic and all FC values were consistent with GI inflammation. Overall, there was a 38% cost saving due to 44 unnecessary endoscopies being avoided.
Conclusion FC is a valuable test for excluding IBD in patients who present with abdominal pain and diarrhoea. FC can confirm relapse in symptomatic patients known to have IBD. When the test is used in these ways patients avoid an invasive procedure and the hospital is saved the cost of the endoscopy. However, guidelines are required to ensure the correct and appropriate use of this relatively new test.

G193 THE ROLE OF ACUTE RESPIRATORY EVENTS IN CHILD DEATHS DUE TO NEUROLOGICAL CONDITIONS AND CONGENITAL ANOMALIES

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Aims To determine the role of acute respiratory events mentioned on death certificates of children dying of a neurological condition or a congenital anomaly in the UK.
Methods Data on causes of death, extracted from death certificates from 11262 children who died between 2006 and 2010 aged one to 18 years, were obtained from national statistics agencies in England and Wales, Scotland and Northern Ireland. We scrutinised all causes of death for children whose underlying cause was a neurological/perinatal condition or a congenital anomaly to determine whether an acute respiratory event had occurred. An acute respiratory event was defined as acute upper and lower respiratory tract infections and acute respiratory failure. The proportion of children whose death certificate mentioned an acute respiratory event was estimated overall and by age-group (1–4, 5–9, 10–14 and 15–18 years).
Results 1433 children died from a neurological/perinatal condition and 867 children died from a congenital anomaly in the study period, representing 12.7% and 7.7% of all deaths. Among children dying of a neurological/perinatal condition, 470 (32.8%) death certificates mentioned an acute respiratory event. The prevalence of acute respiratory events varied by age, from 78/470 (16.6%) in 5–9 year olds to 154/470 (32.8%) in 1–4 year olds. Among children dying of a congenital anomaly, 201 death certificates mentioned an acute respiratory event (23.2%). Prevalence ranged from 29/201 (14.4%) in 10–14 year olds to 99/201 (49.3%) in 1–4 year olds. Overall, the most common acute respiratory events were unspecified pneumonia, recorded on 11.7% of death certificates (268 of 2300), unspecified bronchopneumonia, recorded on 10% (228 of 2300) and unspecified respiratory failure recorded on 9.3% (214 of 2300).
Conclusions Acute respiratory events are common contributing causes of death among children dying from neurological/perinatal conditions or congenital anomalies. Such events may represent a failure of chronic care or be part of an expected, planned death. Further research is needed to determine how to distinguish between these pathways of care.

G194 A 15-YEAR REVIEW OF OPEN VERSUS LAPAROSCOPIC BOIX-OCHOA FUNDOPLICATION

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Aim Boix-Ochoa Fundoplication is a established surgical treatment for gastroesophageal reflux disease. The surgical outcomes of this procedure have been compared to other types of Fundoplication in literature. There is no current publication comparing open to laparoscopic Boix-Ochoa Fundoplication. The aim of this study is to compare the outcomes of open versus laparoscopic Boix-Ochoa Fundoplication.

Abstract G194 Table 1

Patient data categories	Laparoscopic	Open	P-Value
Males (%)	53.3	86.7	0.046
Neurological impairmenent (%)	66.7	100	0.014
Mean age of surgery (years)	7.68 (sd 5.22)	7.32 (sd 5.37)	–
Gastrostomy performed (%)	53.3	60.0	0.713
Other procedure performed (e.g. pyloroplasty) (%)	0.0	46.7	0.003
Mean procedure time (mins)	236 (sd 63)	184 (sd 51)	0.023
Length of high dependency stay (days)	2 (0–6)	3 (1–6)	0.006
Length of hospital stay (days)	4 (2–12)	8 (6–43)	0.003
Length of follow up (years)	1.57 (sd 1.9)	6 (sd 3.7)	0.001
Clinical recurrence (%)	7.7	28.6	0.163

Methods A retrospective review was carried out including all Boix-Ochoa Fundoplications performed by a single surgeon in the same institution from 1995–2010. All available case notes from the laparoscopic group were analysed, these were matched to a similar number from the open group. Demographic, pre-operative, peri-operative and follow-up data were collated. Surgical outcomes were compared in terms of post-operative complications, length of stay, follow up period and clinical recurrence rates. Data were analysed in Microsoft Excel 2003 and SPSS 16.0. The groups were found to be non-parametric. Mann-Whitney U-test and Chi-squared distribution tests were applied. Statistical significance was taken to be $p < 0.05$.

Results 71 procedures were recorded during the study period. 49 were open, 22 were laparoscopic. Notes were available for 15 patients in the laparoscopic group. These were matched with 15 patients from the open group.

The laparoscopic group had more females and less neurologically impaired children. The length of stay post laparoscopy was halved compared to open surgery, but the mean operative time was more than 25% longer. The length of follow-up is longer in the open cohort due to the study design. Clinical recurrence rates were statistically similar between the two groups.

Conclusion This is a small retrospective analysis of this procedure performed by one surgeon in a single centre. Boix-Ochoa Fundoplication appears to be equally effective when performed either open or laparoscopically. The duration of high dependency and hospital stay are significantly reduced with the laparoscopic procedure.

G195 NEONATAL CRANIAL ULTRASOUND: AN AUDIT OF TRAINEE OPPORTUNITY AND COMPLIANCE

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Aims To produce departmental guidelines citing clinical indications regarding the frequency and appropriateness of cranial ultrasound scanning.

To improve documentation and planning of scans to improve time management.

To enhance trainee opportunities in performing and interpreting scans under expert supervision, ultimately leading to improved service provision and confident independent practise.

Methods

Part 1

Senior speciality paediatric trainee questionnaire to frame context of audit: to assess confidence in performing and interpreting (P&I) cranial ultrasound scans (CrUS) on modified Likert scale; data interpretation questions (published questionnaires, author's permission to use) to gauge ability to identify abnormalities, to decide immediate management and discuss prognosis.

Part 2

Full audit cycle of CrUS compliance, implementation and assessment of changes. Audit (cycle 1) over 12-day consecutive period with re-audit 6 months later (cycle 2) after implementing changes.

Results

Part 1

Trainees reported little confidence with P&I.

All identified major abnormality in each image with sensible answers provided regarding management, however limited information regarding prognosis.

Part 2

Cycle 1

Poor compliance, documentation and lack of follow up.

Loose scans with no date, time or comment.

No baby had a Standard Electronic Neonatal Database (SEND) CrUS form completed.

Changes implemented

Weekly teaching with Radiologist experienced in CrUS.

Comprehensive guideline including indications and separate proforma for every baby admitted to the unit prompting an assessment for CrUS.

Posters next to scanner and computers to remind users to document findings on SEND.

Presentation of results.

Cycle 2

Improved compliance rate from 60.0% to 71.4%

Improved documentation from 28.6% to 100% including signature and level of supervision.

80% of scans documented had plan for follow up scan.

No baby had SEND CrUS form completed.

Conclusions Trainee confidence in P&I scans improves with regular Radiology teaching sessions. Dedicated guidelines and proforma improve assessment for scanning, compliance, documentation and work load planning; this improves patient care and enhances service provision. Future action: to standardise CrUS guidelines throughout the Neonatal Network to improve continuity of care.

G196(P) RESIDUAL SMALL BOWEL LENGTH PREDICTS RAISED D-LACTATE WHEN SCREENING FOR BACTERIAL OVERGROWTH IN CHILDREN WITH INTESTINAL FAILURE

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Aims Small bowel bacterial overgrowth (SBBO) may cause non specific symptoms in children with intestinal failure (parenteral nutrition (PN) >28days). Rapid detection of raised serum D-lactate (DL) may be a clinically useful non invasive marker of SBBO. We present the first large cohort of DL in a tertiary referral centre, in patients with current or recent intestinal failure (IF) with new symptoms suggestive of SBBO.

Methods Retrospective review over a 3 year period (01/01/2009 to 31/12/2011) of Patients with IF (0–18 years) and suspected SBBO was done. Demographics, aetiology of IF, symptoms, recent radiology and treatment were recorded. In those with short bowel syndrome, length of remaining small bowel was expressed as percentage of expected small bowel length appropriate for age (SBL) using a published formula. Raised DL was identified as >20μmol/L and recurrence as DL >20μmol/L at least 4 weeks apart and with standard treatment (rehydration, withholding or alteration of feeds, bicarbonate and/or antibiotics).

Results Out of total cohort of 209, 49 patients (28 males; age range 0.16–13.07 and mean 4.76 years) were screened for DL. Aetiology for IF was bowel resection due to congenital malformation (17), necrotising enterocolitis (15), dysmotility (6) and enteropathy (11). 25/49 had raised DL and 24/49 did not have raised DL. There was no