Abstract G414(P) Table 1 Results of data collection

Treatment group	Patient Numbers (n = 47)	Mean HR	Confidence
		Reduction	Interval
High dose dexamethasone	14	45.1%	39.1%–51.0%
Standard dose dexamethasone	23	42.9%	38.5%–47.4%
Prednisolone	4	48.0%	33.9%–62.1%
Other	6	36.3%	29.9%–42.6%

Results Total of 136 patients were diagnosed, 6 notes were not located. 60/130 had steroid treatment. 47/60 (78.3%) experienced significant bradycardia (Table 1).

There was no statistically significant difference in the degree of bradycardia between the different dosages and types of steroids used.

Infants were not at a significantly higher risk for bradycardia (n = 3).

ECG on 11/47 patients showed either no change or sinus bradycardia. IOP was raised in 2/3 measured patients.

Conclusions This is the first clinical study reviewing the clinical relevance of steroid induced bradycardia in paediatric cancer.

Majority of patients on steroid treatment for cancer showed significant bradycardia with no clinical decompensation. No risk factors were identified with respect to dose, type of steroid or age group.

We recommend correlation with BP, ECG, probably IOP measurement in the monitoring of patients on steroid treatment for cancer chemotherapy. Appropriate PEWS charting and escalation of management should still be followed.

This is also the first study to document clinically relevant steroid induced glaucoma in paediatric malignancy treatment. This has led to a further collaborative study to investigate the interaction/mechanism of steroid induced glaucoma and bradycardia in paediatric malignancy.

G415(P) CYTOMEGALOVIRUS INFECTION PRESENTING AS RECURRENT FEVER IN A CHILD RECEIVING STANDARD CHEMOTHERAPY FOR ACUTE LYMPHOBLASTIC LEUKAEMIA

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Introduction Infection presenting with fever is a common cause for hospital admission of immunocompromised children. Initial management is aimed at the treatment and identification of bacterial and fungal infection. Cytomegalovirus (CMV) is well recognised as causing increased morbidity and mortality in immunocompromised children who have undergone stem cell transplants but less so in children receiving standard chemotherapy in acute lymphoblastic leukaemia.

Case description Our patient is a 7 year old girl receiving standard chemotherapy for acute lymphoblastic leukaemia. Post induction she was admitted with significant fever but no other clinical signs or symptoms. She was not neutropenic, CRP was unremarkable and cultures negative. A chest X-ray showed right middle lobe changes and CT chest showed consolidation and atelectasis but no ground glass appearance or nodules. Candida PCR and beta-D-glucan test were negative. She received a course of empiric antibiotics, including macrolides, and antifungal

treatment. Her fever settled. Following cessation of treatment she was readmitted with fever and a dry cough and intravenous antibiotic and antifungal therapy was recommenced. Repeat investigative workup was unremarkable. She settled. A further brief admission with fever settled without intervention following which she was readmitted for the fourth time with fever and cough. She became unwell, developing an oxygen requirement with respiratory signs on chest auscultation. Blood viral PCRs were sent. CMV PCR was significantly elevated at 142,000 copies/ml. BAL fluid was CMV positive and negative for fungi. Intravenous foscarnet was added to the treatment regime. She improved with this and empirical antifungal treatment.

Results and conclusion This patient presented with recurrent fevers resulting in prolonged admissions impacting on quality of life and interruption of treatment. No other positive pathogens for the fever were identified apart from CMV. A literature review confirms that CMV is an opportunistic infection that can cause serious, sometimes life-threatening, illness even during conventional anticancer infection due to profound immunosuppression. This is less recognised in clinical practice. We would highlight the importance of considering CMV infection in cases of recurrent and prolonged fever in these children.

G416(P) HYPOGLYCAEMIA SECONDARY TO 6-MERCAPTOPURINE IN LEUKAEMIA TREATMENT

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Aims To highlight a significant side effect of a chemotherapy drug that is currently poorly recognised in the UK. Hypoglycaemia is a rare but potentially serious side effect of 6-mercaptopurine that forms an integral part of current maintenance chemotherapy for children with acute lymphoblastic leukaemia (ALL). There are now multiple well documented cases in the literature from the USA, Italy and Finland. However in the UK it does not feature in the drug information. This means it is not being discussed with families as a potential side effect to look out for in their children.

Methods We reviewed the case notes and results of 3 children who over the past 5 years were receiving maintenance therapy for ALL and developed symptomatic hypoglycaemia. A literature review was performed looking at hypoglycaemia in children on chemotherapy for ALL and possible risk factors and management strategies that have been identified.

Results We describe 3 cases of symptomatic hypoglycaemia occurring within a UK Oncology shared care department after varying periods of fasting. The children were aged 4 years 8 months, 5 years 2 months and 8 years 4 months. Other causes of hypoglycaemia were excluded. On further investigation other unprovoked episodes were identified in these children and strategies put in place to try and prevent and manage them. The children all required treatment in the form of oral or IV glucose at their initial presentation. The hypoglycaemic episodes ceased once the chemotherapy was completed.

Conclusion Symptomatic hypoglycaemia remains a rare but real risk in children receiving maintenance chemotherapy for ALL. Relatively short periods of starvation have been known to cause hypoglycaemia. These children are regularly fasted for procedures such as lumbar punctures and bone marrow aspirates it is essential that the medical and nursing teams are aware of the

potential risk. It is also our responsibility to educate families of the signs of hypoglycaemia so they can be aware, particularly in the younger children who appear to be at increased risk.

G417(P) DROPLET DIGITAL POLYMERASE CHAIN REACTION (DDPCR) ASSESSMENT OF DEEP MOLECULAR RESPONSE IN CHRONIC MYELOID LEUKAEMIA (CML)

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Molecular monitoring of BCR-ABL1 transcript levels is central to the effective clinical management of patients with CML. Standardised Real time quantitative PCR (RT-qPCR) is currently used to measure the depth and durability of molecular response and forms the basis of the European Leukaemia Net (ELN) treatment recommendations. Close monitoring of patients who come off treatment using maximum sensitivity techniques, is vital in order to ensure early therapeutic intervention, should a BCR-ABL1 clone re-emerge. However, RT-qPCR is susceptible to fluctuations at the limits of its sensitivity, thus limiting its accuracy in assessing complete molecular response. Droplet Digital PCR technology is a new digital PCR technique where the test sample into many individual real-time PCR reactions, where some reactions contain the target molecule (positive) while others (negative) do not. The proportion of negative reactions is used to calculate an absolute count of the number of target molecules in the sample, without reference to external standards. This method should therefore enable increased accuracy and absolute quantification of target molecules, in comparison to the RT-qPCR technique. The aim of this study was to assess the potential of Droplet digital PCR (ddPCR) to improve the sensitivity and precision of the assessment of deep molecular response in patients with CML. A series of 21 patients previously determined to have achieved major molecular response (MMR) using RT-qPCR, were retrospectively monitored for BCR-ABL1 transcripts using ddPCR. A comparison of BCR-ABL1 to ABL1 ratios obtained by ddPCR and RT-qPCR suggested that in 63% of patients ddPCR was more sensitive than RT-qPCR, while in 28% of patients BCR-ABL1 transcript levels were better detected by RT-qPCR. This study demonstrates that ddPCR has the potential to precisely measure changes in minimal residual disease at the limits of detection of current RT-qPCR assays. Assessment of deep molecular response using ddPCR will help to accurately discriminate patients achieving a sustainable response and could therefore be considered for treatment cessation studies from those patients in whom BCR-ABL1 transcripts are likely to re emerge.

G418(P) PAEDIATRIC ONCOLOGY JUNIOR DOCTOR CONFIDENCE SURVEY

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Aims Following a Paediatric Oncology MDT event reviewing themes of 'Teamwork and Integration' the department was keen to explore how confident trainees are at managing Oncology patients and how teamwork could be improved within the department.

Methods In October 2013 a Confidence Survey was disseminated to the current cohort of SHOs and SpRs. Confidence and support questions were answered on a scale rating system, and space given for additional comments. Results were analysed and change implemented in January 2014 with re-audit in August 2014.

Results Initial survey numbers were small with a poor response rate (39%). However in those that responded clear themes emerged.

No trainees were aware of when the Oncology MDT meeting occurs, and none felt part of the Oncology team. 66% of trainees felt Oncology teaching and clinical exposure failed to meet their curriculum needs.

In general the registrars felt more confident managing patients and reassuringly most felt supported by the team.

In the free-flow comments, there was demand to attend oncology clinics and spend more time on the Oncology Unit. Trainees requested teaching expansion beyond febrile neutropenia and to include practical advice regarding management plans.

Based on this feedback changes were implemented. This included clearer highlighting of the Oncology department, introduction of weekly ward round attendance for trainees including once a week grand round teaching, teaching sessions allocated to cover curriculum topics, introduction of weekend plan stickers and an individual patient summary front sheet.

Re-audit in August 2014 showed an improved response rate (50%). There was an improvement in awareness of MDT meetings and feeling of teamwork. 70% of trainees felt Oncology teaching and exposure met their needs.

Conclusions The changes clearly show an improvement in both confidence and feeling of support by the Oncology Team. By changing the clinical environment through introduction of daily ward rounds the team is better integrated and ad-hoc teaching has improved. The introduction of the summary sheets and weekend plans has helped on a day-to-day practical basis of managing patients, and has also helped junior doctors gain a better understanding of different conditions and specific management plans.

British Paediatric Allergy Immunology and Infection and British Association for Community Child Health

G419 "WE CAN'T CHANGE ANYTHING THAT'S HAPPENED IN THEIR PAST, BUT WHAT WE CAN DO IS HELP THEM WITH SOME OF THE INTERNAL MESS THEY'VE BEEN LEFT WITH TO DEAL WITH": HEALTHCARE PROFESSIONALS' EXPERIENCES OF THE INITIAL HEALTHCARE ASSESSMENTS FOR UNACCOMPANIED ASYLUM SEEKING CHILDREN AND YOUNG PEOPLE

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Currently 1,860 Unaccompanied Asylum Seeking Children and Young People (UASCYPs) are being "Looked-After" in England; NICE guidance on how best to meet their needs has called for cultural competency and highlighted a deficit in an applicable evidence-base. This study contributes to the evidence-base for the healthcare needs of UACYPs and factors which influence them within the context of the Initial Healthcare Assessment (IHA).