Aims Fluid challenges are a common tool used in A and E to aid decision-making. As they can often prove time-consuming, we aimed to assess whether they impacted on the 4 hour breach target at a busy district general hospital (DGH) paediatric A and E, and whether their use was always indicated.

Methods We analysed all 4 hour breaches at a busy DGH paediatric A and E over a 24 day period in December 2016. We attempted to identify those breaches which followed an oral fluid challenge initiated by medical staff and documented in the A and E notes. We then assessed whether this cohort of patients showed the following objective signs of dehydration on presentation (from NICE guidelines): tachycardia, tachypnea, decreased skin turgor and decreased urine output. We conducted a literature search to identify evidence supporting the use of fluid challenges.

Results Of 294 breaches, 36 (12.1%) cases involved fluid challenges. Of these, 86% were discharged home.

Half of the children who breached awaiting completion of a fluid challenge had no objective signs of dehydration recorded on presentation. A further third recorded only tachycardia, although many of these were febrile.

Of those with no recorded signs of dehydration, 11% were admitted to the paediatric assessment unit for ongoing observation.

Of the 5 patients admitted, two had 2 or more signs of dehydration whilst 2 exhibited no characteristic symptoms.

Our literature search revealed no high quality evidence for the use of fluid challenges as a reliable diagnostic aid.

Conclusion Fluid challenges were implicated in a significant proportion of all paediatric breaches, half of which recorded no core objective signs of dehydration on presentation. We would therefore suggest this cohort did not require a fluid challenge yet accounted for over 6% of all departmental breaches. No strong evidence supports their use.

We advocate a more judicious use of fluid challenges limited to the small proportion of children showing objective signs of mild or moderate dehydration at presentation where their use may provide greater decision-making power. This may help reduce breaches at the busiest time of year.

A larger scale study would provide with more information to further our conclusions.

We evaluated whether our patients with BNHL with residual radiological abnormalities received follow-up imaging and biopsies, and how these investigations affected clinical outcomes.

Design/methods Data was collected for all children diagnosed with BNHL between 2006–2017 at a UK tertiary paediatric oncology centre. Measures included patient age at diagnosis, gender, histology, MYC status, and bone marrow or CNS involvement. Chemotherapy courses were recorded, including escalation of treatment from Group B to C. Follow-up imaging and clinic letters were analysed, with residual disease being categorised according to formal radiology reports.

Results 66 children aged 1 to 11 years were diagnosed with BNHL in the period studied; 57 males (86%) and 9 females (14%). 14 children had bone marrow positivity (21%), and 8 children CNS positivity (12%). 41 children (62%) had MYC positivity.

At end of treatment, 28 children (42%) did have abnormal radiological findings; 4 of them underwent biopsy to exclude active disease. None of the children undergoing follow up imaging demonstrated disease relapse. Some children received multiple repeat scans involving either significant radiation exposure or general anaesthetic risk without altering outcomes. Overall survival was 94% (n=62), with 4 deaths.

Of 4 deaths:

- 2 had good COP response on initial imaging but relapsed on treatment,
- 1 had stable residual disease on scans but died of secondary AML post BMT
- 1 did not respond to chemotherapy with clear progression of disease on imaging and palliation.

Conclusions Children with BNHL have good outcomes with intensive chemotherapy treatment. None of our patients with residual imaging abnormalities at treatment completion had disease relapse or progression, questioning the clinical need for longterm imaging, particularly if involving radiation. Biopsy provided reassurance without altering patient management. A protocol addition should be developed to guide follow up imaging where residual imaging abnormalities exist at end of treatment.

British Society for Haematology and Children's Cancer and Leukaemia Group

G355 TO IMAGE OR NOT TO IMAGE? B CELL NON-HODGKINS LYMPHOMA (BNHL) AND RESIDUAL TISSUE ON SCAN AT DISEASE REASSESSMENT IN CHILDREN UNDER 12

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Background/objectives Children with BNHL have good outcomes with intensive upfront chemotherapy. Disease relapse or progression, whilst rare, is associated with very poor outcome hence the proven need for early disease assessment and escalation of chemotherapy if lacking a radiological early-treatment response. The value of post-treatment imaging surveillance or biopsy in children with residual imaging abnormalities in detecting and preventing disease relapse/progression is unclear.

G356 DECISION MAKING MANAGEMENT GUIDELINE FOR PATIENTS (<19 Y) WITH IDIOPATHIC THICKENED PITUITARY STALK AND/OR IDIOPATHIC CENTRAL DIABETES INSIPIDUS

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Aim To develop a guideline for the investigation and management of children and young people up to the age of 19 years with idiopathic thickened pituitary stalk (iTPS) and/or central diabetes insipidus (iCDI) where the aetiology is not apparent at presentation.

Methods The guideline development group (GDG) identified the objectives and the clinical questions which needed to be addressed. These were reviewed by guideline stakeholders and