initiation of topical calcineurin inhibitors.[3] Plan 2: Medication reviews for those patients on multiple drug regimens with non-adherence issues. The aims and rational of project were discussed with the lead paediatric allergy consultant and wider paediatric allergy team. The referral criteria were established. The pharmacist clinic ran alongside the MDT clinics.

Measurement of improvement For Objective 1: Reduce the outpatient clinic waiting time by 60% for those patients referred to pharmacist led clinic for an eczema review after the initiation of topical immunomodulatory therapy. To achieve this objective, four PDSA cycles were carried out, there was a reduction in the waiting time with each subsequent cycle. Over the six-month period, 26 eczema reviews were carried out in total, the changes made in PDSA cycles 1 to 4 were implemented for the subsequent reviews, data collected for these patients showed a reduction of 64% in waiting time for eczema reviews after the initiation of TCI's

For Objective 2: To complete 100% of medication reviews within 4 weeks for those patients referred to pharmacist clinic on multiple drug regimens with non-adherence issues. To achieve this objective, three PDSA cycles were carried out, there was a reduction in the waiting time with each subsequent cycle. Over the six-month period, 19 medication reviews were carried out in total, the changes made in PDSA cycles 1 to 3 were implemented for the subsequent medication reviews, data collected for these patients showed that the four-week target was achieved.

Conclusions The introduction of a paediatric pharmacist clinic was received positively by the paediatric allergy MDT and the paediatric allergy patients seen (excellent results from patient satisfaction survey). It has contributed to improving patient care, by improving patient safety and reducing waiting times. The outpatient clinic waiting time was reduced by 64% for eczema review after the initiation of topical immunomodulatory therapy for those patients that were referred to the pharmacist clinic and 100% of medication reviews were carried out within 4 weeks of referral. The clinics had significant cost saving implications through deprescribing and consultant clinic time. Due to the significant success of this project, pharmacist led allergy clinics have been implemented on weekly basis and the pharmacist manages own patient case load.

REFERENCES

1. England.nhs.uk. 2013. Available from: https://www.england.nhs.uk/wp-content/uploads/2013/06/e03- paedi-medi-allergy.pdf
2. Bsaci.org. 2019. Available from: https://www.bsaci.org/about/BSACI_Paed_allergy_standards_2-13.pdf Standards for paediatric allergy services in secondary care. BSACI
3. Overview | Atopic eczema in under 12s: diagnosis and management | Guidance | NICE [Internet]. Nice.org.uk. 2019. Available from: https://www.nice.org.uk/guidance/cg57

P31 ORAL PROPRANOLOL LIQUID: A SNAPSHOT SURVEY OF CONCENTRATIONS IN USE

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Aim For several drugs available as licensed liquids, multiple concentrations exist. Four different propranolol concentrations are available: 1 mg/mL, 2 mg/mL, 8 mg/mL and 10 mg/mL.[1] Existence of multiple concentrations increases the chance of dosing errors. The Neonatal and Paediatric Pharmacists Group (NPPG) and the Royal College of Paediatrics and Child Health (RCPCH) recommend standard concentrations for some unlicensed liquid medicines[2], but no such recommendation exists for drugs available as licensed products. The British National Formulary for Children (BNFC) advocates that propranolol 1 mg/mL be used to manage infantile haemangioma, but no recommendation is made for other indications.[1] This study aimed to characterise the use of the various propranolol liquid concentrations and determine how closely the recommendation to use 1 mg/mL for haemangioma is followed.

Method A Survey Monkey® questionnaire was created and distributed to NPPG members by email, remaining open for two weeks. Respondents were asked whether the recommendation to use 1 mg/mL for haemangioma is followed in their centres. Where this recommendation was not followed, respondents indicated the alternative concentration used. Use of alternative concentrations for other indications was also probed, plus the rationale for the use of more than one concentration. Centre name was requested to identify duplicate responses, with the plan to subsequently present the data in an anonymised form. Ethical approval was not required.

Results 64 responses were received. Three centres provided duplicate responses; in two of these cases the answers given matched, but in one the answers conflicted. Where the duplicates matched, data was included in the analysis only once for each centre. Where the response conflicted, it was excluded from analysis. Responses from 60 centres were analysed: 57 from the United Kingdom (UK) and 3 from elsewhere. 31 (52%) of centres use 1 mg/mL for treatment of infantile haemangioma, reflecting BNFC recommendations. For those not following the recommendation, 9 used only a 2 mg/mL concentration and 17 used only 10 mg/mL. Two centres used different concentrations according to the dose prescribed; none reported using 8 mg/mL and one non-UK centre reported use of 20 mg/mL. 26 (43%) centres reported using more than one concentration of propranolol liquid. One cited reason included trying to follow both the BNFC recommendation to use 1 mg/mL for haemangioma whilst also trying to meet regional cardiac centre requests to use 10 mg/mL. Deviating from the recommended 1 mg/mL for haemangioma due to patients being unable to tolerate large dose volumes was raised, as was excipient load in some 1 mg/mL products. Respondents expressed a desire to standardise to a single concentration, though the recommendation to use 1 mg/mL for haemangioma was highlighted as a barrier. Treatment of both adults and children within individual institutions was also considered a complicating factor.

Conclusions The recommendation to use 1 mg/mL when treating haemangioma is not followed in just under 50% of centres. Over 40% of centres reported having more than one concentration of propranolol in use. There is a desire to adopt a single standardised concentration for all indications, although there are a number of potential barriers. Further work is needed to establish the best approach for standardisation.

REFERENCES

1. Propranolol. Joint Formulary Committee. British National Formulary for Children (Online). London: BMJ Group and Pharmaceutical Press. Available from: http://www.medicinescomplete.com [Accessed June 2022].

2. Using Standardised Concentrations of Liquid Medicines in Children. Neonatal and Paediatric Pharmacists Group and Royal College of Paediatrics and Child Health. Available from http://nppg.org.uk/standardised-strengths-of-liquid-medicines-for-children/ [Accessed June 2022].

P32 TO EVALUATE PROPHYLACTIC POSACONAZOLE PRESCRIBING IN CHILDREN UNDER 12 YEARS WITH PRIMARY IMMUNODEFICIENCY

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Aim Current prescribing in our trust, in the absence of a guideline and licensing for prophylactic posaconazole in children under 12 years, is based on a paper by Boonsathorn et al. 2018 [1] The purpose of this audit is to evaluate the extent to which prescribing and monitoring of prophylactic oral posaconazole prescribed within our paediatric inpatient population is in line with published recommendations.[1] Targets were 100% of patients were dosed as recommended[1]; 100% of trough concentrations for posaconazole were taken within 5–10 days after initial administration; and if trough concentrations are not in range (>0.7 mg/L) was corrective action taken.

Method Patients between the ages of 2 months to 12 years with primary immunodeficiency recorded on their health record as being initiated on prophylactic posaconazole in the last 2 years were identified. Where patients met the inclusion criteria; age, weight, posaconazole formulation, date of initiation of posaconazole, trough concentration, date of trough concentration and dose adjustments were collected. Data was collated and analysed using MS Excel. Caldicott Guardian approval (ID: 9378) was granted by our trust and was added to the clinical effectiveness register (ID: 13451).

Results 23 patients were included with the mean age of 3.7 years. 84% of patients were dosed as recommended by Boonsathorn et al. 52% of all patients got a trough concentration taken within the 5–10 days and 75% of those patients had a trough concentration of >0.7 mg/L. 25% of patients had concentrations taken in 5–10 days that were <0.7 mg/L and doses were increased. These increased doses were not as recommended.[1] 33% of patients had concentrations taken in 5–10 days that greatly exceeded 0.7 mg/L and had dose reductions.

Conclusion The majority of the patients were dosed as recommended and had a trough concentration >0.7 mg/L. Recommendations could be translated into a guideline to include; advising trough concentrations are taken 5–10 days of initial administration to get an accurate picture of the posaconazole concentration. To include recommendations of dose adjustments following <0.7 mg/L trough concentrations to get consistent optimal prescribing. There was no maximum trough concentration for prescribers to adhere so the addition of a maximum trough concentration and recommendations of dose reductions would improve the clinical safety of prescribing prophylactic posaconazole. Limitations of this audit included the limited number of patients that fitted the criteria and results cannot be generalised for all oral formulations as only one patient was prescribed tablets.

REFERENCE

1. Boonsathorn, S, Cheng I, Kloprogge F, *et al*. Clinical pharmacokinetics and dose recommendations for posaconazole in infants and children. *Clinical Pharmacokinetics* 2018;**58**:53–61.

P33 PATIENT/PARENT ACCEPTABILITY OF DIFFERENT FORMS OF ORAL HYDROCORTISONE IN CONGENITAL ADRENAL HYPERPLASIA

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Aim Hydrocortisone is used in Congenital Adrenal Hyperplasia (CAH) as a long-term replacement therapy. Accurate dosing, patient acceptability, and ease of administration of the available dosage forms are vital as treatment is life-long.[1] Prior to the introduction of a licensed immediate-release formulation the use of a variety of unlicensed oral hydrocortisone preparations was widespread. This project aimed to explore patient/parent acceptability of oral hydrocortisone preparations in the real-world setting. This included assessment of preferences and the reasons for discontinuation if more than one formulation had been used.

Method This clinical audit was registered within the Trust. Two e-surveys were developed by a multi-disciplinary team (MDT) using Microsoft Forms, one for parents of children <8 years and the other for parents and children ≥8 years. With permission, both e-surveys included the validated Pediatric Oral Medicines Acceptability Questionnaire for caregivers (POMAQ-C) and the POMAQ-P was optional for patients ≥8 years old.[2] Most questions utilised the Likert rating scale, with 5 being positive and 1 being negative. The form was piloted with one family, then parents were contacted by the clinical team and if happy to take part, a member of the project team contacted them with the survey link details. Inclusion criteria: Patients with CAH aged 6 months to 17 years (inclusive) taking an oral form of hydrocortisone. Exclusion criteria: non-UK residents, non-English speaking, non-classical CAH patients, and/or not taking an oral form of hydrocortisone.

Results 33 eligible patients were identified. The results below represent the findings from the first 8 families. Patients were aged between 1 to 17 (mean 7.7) years. Three (37.5%) were taking hydrocortisone tablets, one (12.5%) was taking Alkindi® granules, and four (50%) hydrocortisone liquid. The mean score for parent-rated overall acceptability of tablets, granules, and liquid preparations was 4.3, 4, and 4.75, respectively. Parent-rated mean acceptability score for their child was 4.67, 3, and 5, respectively for the different types of formulations. One patient had moved from liquid hydrocortisone to tablets due to problems obtaining prescriptions and transporting/refrigerating the product when not at home. Another had moved from granules to liquid as the parent found it 'difficult to give to a baby' and reported issues obtaining a prescription.

Conclusion Assessment of the acceptability of medicines for children in a real-world setting is possible and allows for parents/carers and patients to provide practical feedback on available treatment options. To date, parental feedback received indicates a slight preference for liquids over tablet and granule hydrocortisone formulations, although data is currently limited.

REFERENCES

1. Boulos N. Formulation matters: safe oral hydrocortisone use in children. *The Pharmaceutical Journal* December 2021;No 7956;307(7956).
2. Turner-Bowker DM, An Haack K, Krohe M, *et al*. Development and content validation of the pediatric oral medicines acceptability questionnaires (P-OMAQ): patient-reported and caregiver-reported outcome measures. *Journal of Patient-Reported Outcomes* 2020;**4**(1).