and achieving target bloods glucose values from the outset of diagnosis can lead to an optimal HbA1C (48mmol.mol or lower) one year after diagnosis. More awareness needs to be created among primary care and paediatric teams in recognising symptoms of diabetes and the importance of normalising blood glucose values early.

International Child Health Group

1239

RANDOMIZED CONTROLLED TRIAL ON THE EFFECT OF WEEKLY IRON/FOLIC ACID SUPPLEMENTATION ON ANEMIA AND SCHOOL PERFORMANCE AMONG SCHOOL CHILDREN IN RURAL SUDAN

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Background Anemia is a major health problem affecting one-quarter of the world's population. Anemia is particularly severe in developing countries, where poverty and other socioeconomic and health factors exacerbate it. Children are among the population groups that are more affected by iron deficiency anemia comprising around 60% of anemia cases globally. One of the most devastating complications of anemia is its impact on children's school performance. Anemia, which is often caused by socioeconomic disparities, can produce more socioeconomic inequity by reducing children's school performance and negatively impacting their educational attainment and future economic potentials.

On the treatment side, supplementation of iron plus folic acid is recommended by some health authorities, including the WHO, as a measure to counter the effect of iron deficiency anemia on pre-school and school-age children.

Sudan is one of the low-income African countries where the prevalence of childhood iron deficiency anemia is widespread. Despite that, very little research is done to study the consequences of this serious public health problem and explore effective approaches to address this alarming risk. Our study was the first to examine the effect of iron/folic acid supplementation on anemia, hemoglobin, and school performance among Sudanese primary school students.

Objectives To evaluate the prevalence of anemia, its risk factors and the effect of iron/folic acid supplementation versus folic acid alone on anemia and school performance among school children in Northern Sudanese village in 2020

Methods This study was an interventional – community based double-blind RCT with concurrent parallel study design, involving 220 healthy school children in a small village, Northern Sudan. Out of the 220 children study group, 5 were excluded from the study because of absence or not meeting the study criteria. The trial was conducted from January 2020- April 2020. Of the study group, 109 pupils were given iron plus folic acid intermittently, and 106 were given folic acid only. Levels of hemoglobin and school performance were then measured in the two groups. We used a mixed-model logistic regression analysis to test for an intervention effect on hemoglobin levels and school performance change in the experimental group compared to the control group.

Results Intermittent iron with folic acid supplementation significantly reduced the probability of anemia by 65.7% ($P = 0.00216$) in the experimental group, compared to the control group, which was given folic acid only.

The effect of iron/folic supplementation on school performance was not statistically significant, probably due to the complex nature of academic achievement.

Conclusions Intermittent supplementation of iron plus folic acid is effective in treating iron deficiency anemia among school-age children. School performance is known to be affected by anemia in childhood, but evaluating the impact of iron supplementation on this consequence of anemia needs a more extended cohort study.

British Association of Perinatal Medicine and Neonatal Society

1240

TRANSFUSION-ASSOCIATED NECROTISING ENTEROCOLITIS (TANEC) CASES REPORTED TO THE UK HAEMOVIGILANCE ORGANISATION 2011–2019

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Background Necrotising enterocolitis (NEC) is a serious neonatal gastrointestinal condition associated with significant morbidity and mortality. It affects 5–7% of preterm low birth weight (500g-1500g) infants. It is postulated that trigger events and environmental factors initiate intestinal injury in a vulnerable infant, prompting a hyper-inflammatory response.

NEC occurring within 48 hours of a red cell transfusion has been described as 'transfusion-associated NEC' (TANEC). From numerous observational/case-control studies it is estimated to occur after approximately 25–35% of transfusions, generally in older infants born more preterm than others with NEC; multiple pathogenic mechanisms have been proposed. It has been difficult to establish causation or true association; these are not supported by indirect evidence from meta-analysis of randomised controlled trials of liberal vs restrictive transfusions.

Objectives To analyse cases of TANEC reported to the UK haemovigilance scheme between 2011 and 2019.

Methods The UK Serious Hazards of Transfusion (SHOT) haemovigilance scheme collects and analyses anonymised reports of adverse events and reactions following blood transfusion. SHOT has encouraged reporting of TANEC since 2011. The paediatric reports are all separately analysed by the SHOT paediatric working expert sub-group.

Results Between 2011–2019, 19 cases of TANEC were reported to SHOT. All who had gestational age recorded (13/19) were preterm, with a median gestation of 26+6 weeks (range 23+3 to 33). Age at presentation with TANEC was less than 28 days for 5 cases (youngest 10 days), 1 month for 13, and 2 months for a single case. For all cases where a time of onset of symptoms following transfusion was stated (16/19) this was within 24 hours of transfusion with a mean of 3 hours.

This was a very sick cohort of infants and 7 babies died. 9 babies were assessed to have had major morbidity in relation to TANEC. When considering how likely a transfusion is to have caused an adverse event a measure called imputability is used, ranging from 0 to 3. An imputability of 1 means 'possible', where the evidence is clearly in favour of attributing the adverse reaction to causes other than the blood or blood components. Six of the babies who died had an imputability of 1, and one was unrelated to transfusion.

Conclusions TANEC is associated with significant morbidity and mortality. The cases reported to SHOT had gestational and postnatal age characteristics in line with those previously described for TANEC. Based on available observational studies, there appears to be under-reporting of these cases to SHOT. Staff should be aware of this potential association between transfusion and NEC in sick infants. TANEC cases are SHOT reportable. Reporting helps share the learning and can identify common themes with increasing cohort numbers.

Further high-quality research is necessary to identify causation and risk factors for both NEC and TANEC, together with effective mitigation measures. We await with interest the outcome of the WHEAT (WithHolding Enteral feeds Around packed red cell Transfusion) randomised controlled trial.

Child Protection Special Interest Group

1243 SHOULD PAEDIATRICIANS BE TRAINED IN THE USE OF MEDICAL PHOTOGRAPHY?

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Background Paediatricians are responsible for carrying out child protection medical examinations, which will sometimes include the use of photography to document injuries. Ideally, a trained medical photographer would take all photographs when needed. This service is not always available and the paediatrician may have to take time critical photographs.

Objectives Our aim was to audit the child protection photographs taken in one year at our hospital and compare them to the national guidelines from the Institute of Medical Illustrators.

Methods All children (0–18years) who had a child protection medical in 2019 were identified. Those that had photographs taken during their medical were highlighted and the photographs were compared against the standards set out by the Institute of Medical Illustrators.

Results 49 child protection medicals with photography were completed in 2019. Clothing was removed appropriately in 86% of cases. However, an appropriate background was used in only 18% of photographs. The three photograph principle (a location photograph, a close-up photograph, and a close-up photograph with a linear scale) was used in 0% of cases. Location photographs or close-ups with no linear scale were taken in only 14% of cases. Photographs with a linear scale were taken in 67% of cases, in which a triangle ruler was used in 83% of these.

Conclusions Overall, child protection medical photography in our centre is of inadequate quality. Ideally, support from medical or police photography should be available at all times for child protection medicals and other medical photography. This

is not currently the case in all centres. With the COVID-19 pandemic, there has been an increase in domestic child abuse cases, possibly leading to more of us, as paediatricians, needing to complete child protection medicals. We recommend that training is offered to all paediatricians who may be taking medical photographs, and could be considered an important part of trainee induction. Any photographs taken can be used as evidence in court and, therefore, their quality is of paramount importance.

British Society of Paediatric Endocrinology and Diabetes

1244 COVID-19, LOCKDOWN 1.0, AND THE MOVE TO TELEMEDICINE: IMPACT ON GLYCATED HAEMOGLOBIN IN PAEDIATRIC DIABETES MELLITUS

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Background Maintaining blood glucose levels within target is the cornerstone of diabetes mellitus management, reducing the risk of complications. Glycated haemoglobin (HbA1c) is the gold standard assessment, reflecting plasma glucose over 2–3 months. NICE guidance recommends four clinic attendances and HbA1c measurements per year, with a target of 48mmol/mol or lower. The National Paediatric Diabetes Audit showed a mean of 64.6mmol/mol in 2018/19.

At a UK paediatric diabetes unit, face-to-face clinics (F2F) were converted to telephone appointments on 30/03/2020 due to the first COVID-19 UK lockdown. There was a phased return to F2F and HbA1c testing from June 2020.

Objectives To determine whether the COVID-19 pandemic and consequent national lockdown and move to telemedicine affected HbA1c levels in children with diabetes mellitus.

Methods HbA1c results were recorded throughout 2020, excluding those diagnosed in 2020. Each patient's final HbA1c in January-March before lockdown (Pre-LD) was compared to both their first HbA1c after lockdown (Post-LD) and the mean of all of their HbA1cs after lockdown (Av-Post-LD). Comparisons were analysed grouping patients by Pre-LD, which was assumed to be their baseline.

Results Of the 258 patients, 61 (23.64%) had no Pre-LD and 38 (14.73%) had no Post-LD, excluding them from further analysis. Numbers of F2F and HbA1c testing varied throughout the year; 92 tests were done in January, pre-pandemic, falling to 1 in April, peaking at 83 in September, dipping to 27 in December. Number of tests per patient post-lockdown varied from 1–5 (mean 1.45). When comparing results grouped by baseline, a correlation was seen (table 1).

In the four groups with the highest initial HbA1c, improvements were seen when comparing Pre-LD to both Post-LD and Av-Post-LD, with the >69 group improving by 9.73mmol/mol and 10.18mmol/mol respectively. Only the two highest groups demonstrated a sustained improvement. In the two groups with the lowest initial HbA1c, a slight deterioration was seen when comparing Pre-LD to both Post-LD and Av-Post-LD, with a trend towards deterioration.

Conclusions Perhaps unsurprisingly, HbA1c testing fell during lockdown and never returned to pre-lockdown levels,