The commonest symptoms were reduced GCS (20/31), respiratory depression (11/31), seizures (10/31) and tachycardia (8/31). Most commonly, cases required 3–5 different managements. These were: continuous oximetry PLUS oxygen PLUS ECG monitoring (68%), GCS <12 AND frequent GCS monitoring (68%), cardiovascular monitoring (65%), and invasive ventilation (48%).

Conclusions Despite relatively small numbers, our study shows that accidental poisoning is a preventable condition. Significant poisoning can cause serious symptoms requiring various treatments, but rarely results in death. Our study demonstrates that adult medications that are currently not subject to child resistant packaging laws are causing significant harm to children. This highlights that further legislation is necessary on all medications to prevent harm and even death in children. In all ages, a large proportion of episodes involved illicit drug use suggesting further public health medicine and drug safety campaigns are required to educate both young people and also families around the risks and dangers of drug use.

Down Syndrome Medical Interest Group

1740

PROFILE OF THYROID DISORDERS IN CHILDREN WITH DOWN SYNDROME

Shiela Puri, Bethany McLelland, Nicola Bryce. *Leeds Community Healthcare NHS Trust*

10.1136/archdischild-2021-rcpch.822

Background The prevalence of thyroid disorders in children with Down syndrome is 6–10%. Guidelines on thyroid disorders in children and young people with Down syndrome: surveillance and when to initiate treatment in April 2020 were published by the Down Syndrome Medical Interest Group U.K & Ireland in 2020. The spectrum of thyroid disorders in children with Down syndrome includes congenital hypothyroidism and autoimmune thyroid disorders.

Objectives We undertook a retrospective study to review the profile of thyroid disorders of children with Down syndrome currently served by our child development centre serving a child population (0–19 years) of 64,500 children.

Methods A retrospective electronic case notes review was undertaken of 69 children with Down syndrome attending the child development centre, to identify children with a diagnosis of thyroid disorder and assess their biochemical and clinical presentation

Results Electronic case notes of 69 children with Down syndrome were reviewed. One infant (male) was diagnosed with congenital hypothyroidism. Six children were diagnosed with autoimmune hypothyroidism. Prevalence rate 8.8 percent. The median age at diagnosis was 6.6 years. The gender ratio was 3 female: 4 male. Two of these children had a borderline TSH for prolonged period before formally receiving a diagnosis of hypothyroidism, this ranged between 8 months and 45 months, the thyroid function was monitored every 6–12 months during this period. At the time of the initial raised TSH levels the TPO antibodies were normal and increasing to 997 and >1300. Two children have free T4 levels above the normal range (21) despite their TSH levels being above the local reference range and good compliance with medication. There was a rise in BMI at the time of diagnosis in six children (data not available for remaining children). Symptoms noted at diagnosis of thyroid disorder were weight gain,

tiredness and sleep disturbance particularly in female patients. None of the children were recorded to have goitre. Two additional children were noted to have persistently raised TSH levels currently undergoing close monitoring, interestingly both these children have a slight rise in their TPO levels but less than 100 and a marginal increase in their BMI at the time of the initial rise in TSH levels, both sets of parents declined repeat serum thyroid testing within 1–5 days as recommended in the updated guidelines. There were no children diagnosed with hyperthyroidism or Graves' disease.

Conclusions Thyroid disorders in children who have Down syndrome appear to follow a more insidious course with borderline or subclinical hypothyroidism being more commonly present than the general population. It is important to closely monitor the thyroid function to prevent additional disability. With the introduction of earlier thyroid surveillance at 4–6 months as per the updated DSMIG guidelines, it is important to undertake large-scale prospective population studies to evaluate the developmental outcomes in children with Down syndrome and subclinical hypothyroidism.

British Paediatric Neurology Association

1741

IT'S NOT ALWAYS ABOUT HONEY

¹Omobolanle Kazeem, ²Ruchi Arora, ²Sara Abdelgalil, ²Ravi Alanoor, ²Katherine Bohanan. ¹NHS, ²NNUH

10.1136/archdischild-2021-rcpch.823

Background Infantile Botulism (IB) is a rare, but potentially fatal disorder typified by flaccid paralysis in infants. It is caused by toxins released by gram-positive anaerobic bacteria, *Clostridium botulinum* - soil organisms that exist as spores. These botulinum spores are consumed (directly or through contaminated foods such as honey or home-canned foods) and they colonise the large intestine of infants before releasing the botulinum toxins that bind irreversibly to the neuromuscular junction causing flaccid paralysis. Paralysis especially of the muscles of respiration place the affected infant at risk of death if respiratory support is not given

Objectives To review a case of IB and its management.

Methods Case report.

Results A 6-month-old male infant with no significant past medical, family, and birth history, presented to the Children's Assessment Unit with cough, decreased feeding, and lethargy at the outset of neurologic symptoms, and respiratory distress. Further anamnesis revealed no sick contacts, honey ingestion, recent travels, and indoor pet exposure. His review of systems was negative.

Upon initial assessment the infant's vital signs were normal and there were no notable findings on systemic examination apart from bilateral crackles and wheeze. However, his respiratory status worsened in less than 24 hours after admission, resulting in his mechanical ventilation and PICU admission.

The patient's PICU course was notable for the development of a broad differential consequent of his unexplainable and deteriorating clinical status. The diagnosis of infantile botulism was eventually entertained on the heels of an unremarkable extensive lab and imaging testing. POSITIVE Murine micro-assay for botulinum toxin was confirmatory.

The infant was treated with botulinum immunoglobulin (Baby BIG) on day 13 of his admission with remarkable

improvement 24 hours after administration. At subsequent follow-up with the multidisciplinary team, he had no residual neuromuscular deficit.

Conclusions The non-specific presentation in our patient confounded the diagnosis of IB. Of note, the patient's initial symptoms were felt to be suggestive of bronchiolitis and suspected sepsis. While various case reports have shown that infantile botulism comprises a wide-ranging clinical spectrum from non-specific symptoms to cranial neuropathies, performing an adequate neurologic exam in young infants is challenging, further compounding the problem of diagnosis.

Environmental contamination and ingestion of honey are believed to be the most common source of exposure albeit none was reported in our patient.

Mainstays of treatment for infantile botulism remain mainly supportive but the use of botulinum immunoglobulin (*Baby-BIG* - a human-derived botulism antitoxin that neutralizes botulism toxin) is an effective treatment in early disease course.

This case brings up three unique points that are worth considering. One is the rapid course of development of this disease. Second is the unknown exposure to *C. botulinum* in this patient injecting to the fact that identifiable environmental exposure or ingestion of honey may not be possible in all cases of infantile botulism. And third is the difficulty in making a diagnosis of IB.

Like a needle in a haystack, IB can get missed. Therefore, it is always good to have a broad list of differential diagnoses especially in patients with non-specific presentations.

RCPCH Trainees Committee

1742

PROVIDING SUPPORT TO TRAINEES AT TIMES OF TRANSITION: A PEER MENTORING SCHEME IN PAEDIATRICS

¹Kathleen Duffin, ²Leanne Brennan, ²Jen McGill, ²Claire Hathorn. ¹University of Edinburgh; ²Royal Hospital for Sick Children, Edinburgh

10.1136/archdischild-2021-rcpch.824

Background Mentoring – a confidential relationship, whereby an experienced individual (mentor) supports another (mentee) through personal and professional development – is associated with positive outcomes including improved staff retention. As well as being supported by the BMA and GMC, mentoring is in line with current RCPCH focus on retention and wellbeing. Times of transition, such as return from maternity leave, are associated with self-reported under-confidence in paediatric trainees.

Objectives This paper describes a mentoring programme that aims to provide practical and pastoral support to paediatric trainees at times of transition.

Methods The South-East Scotland Paediatric Mentoring Programme was established in 2017. Currently, the programme has two components: formal mentoring after time out of programme (OOP), and peer support via a buddy system for trainees who are new to the region. Mentors are required to undertake formal mentoring training. All participants must adhere to doctrines of confidentiality and good practice. Regular feedback is gathered from participants using anonymous surveys.

Results To date, 23 mentors have been recruited and 38 trainees have been offered mentors following OOP; the majority

have taken maternity leave (23/38), with others returning from research/education/bereavement/sickness. Twenty-four (63%) trainees have accepted and been paired with trained mentors. Uptake was highest amongst those returning from first maternity leave (9/10), with 7/13 requesting support after second/subsequent maternity leaves. Four trainees accepted following research, one on transition to consultant post, and three for other reasons.

Through the buddy scheme, 43 trainees have been offered buddies and 36 (84%) accepted. This encompasses newly starting ST1s and more senior trainees who have transferred to the region.

Feedback obtained through anonymous surveys found 71% of trainees described their buddy as a 'significant source of support.' Trainees specifically highlighted the induction and associated social event as positive. All mentees found the programme very or extremely valuable. Two mentees have subsequently undergone training to become mentors. Mentors reported enjoying their role, acquiring skills useful in other areas of life, and being keen to engage with further training.

Conclusions Peer mentoring can provide valuable support at times of transition. In this cohort, paediatric trainees returning from time OOP are keen for support, particularly when returning from a first maternity leave. Future aims of the programme are to widen access to mentors for additional points of transition, such as moving onto middle grade rota. We hope to be able to offer initial training and regular updates for mentors as the programme develops. We also aspire to build links across Scotland and seek endorsement from NHS Education for Scotland and RCPCH, so that trainees across the deanery can access support at times of transition.

British Association of Perinatal Medicine and Neonatal Society

1745

IMPLEMENTATION OF ROUTINE NEWBORN PULSE OXIMETRY TO IMPROVE CONGENITAL HEART DISEASE DETECTION – A QUALITY IMPROVEMENT PROJECT

Ronel Talker, Jayanta Banerjee. Imperial College Healthcare NHS Trust

10.1136/archdischild-2021-rcpch.825

Background Routine pulse oximetry screening for newborns is not currently recommended by the UK National Screening Committee (UKNSC), though the scheme is increasingly being adopted by maternity & neonatal units around the world. The antenatal detection rate of congenital heart disease (CHD) remains as low as 55% in the UK, with approximately 20–30% of CHD cases being undiagnosed at the time of post-natal discharge. Critical CHD affects 2 in 1000 births and accounts for 3–7.5% of infant mortality, with earlier diagnosis being associated with more-favourable outcomes. Furthermore, newborn pulse oximetry screening has been shown to detect cases of critical CHD, that would have otherwise been missed.

Objectives Utilising quality improvement (QI) methodology, the primary aim of our project was to effectively implement a Routine Pulse Oximetry programme at a large, tertiary London maternity trust, which delivers approximately 9000 babies per year, such that every baby born across the two maternity units would have pre-ductal and post-ductal oxygen saturations