and these were uploaded using a standardised data entry form on the validated online REDCap system. Standardised 28-day rates were calculated for PED attendance, hospital admission, and selected diagnoses; interrupted times series were performed. Ethics approval was obtained at all study sites

Results PED attendances varied between 420 and 6,370 between sites for January 2020. Across sites, a reduction in PED attendances (March 2020 vs March 2021) ranged from 29.0% in children aged 5–12 years to 44.8% in children <14 days; a larger reduction was seen at the 6 UK sites. In a preliminary sample across sites, no increase was seen for appendicitis (standardised 28-day number of patients of 181 in April 2018 vs 219 in April 2019 vs 182 in April 2020) or diabetic ketoacidosis (27 vs 29 vs 28); a reduction was observed for otitis media (1628 vs 1538 vs 214), tonsillitis (3672 vs 3506 vs 776), and mental health issues (329 vs 300 vs 176). Reductions in hospital admissions were seen for any type of admission, including admissions >72 hours and to intensive care.

Conclusions This multinational study confirms a dramatic reduction in PED attendances of all levels of severity observed during the first wave of COVID-19 across Europe. The reduction was consistent in all participating sites, despite the heterogeneity in social distancing measures introduced. We did not find an increase in appendicitis or diabetic ketoacidosis, and a decrease for mental health issues.

British Society of Paediatric Endocrinology and Diabetes

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THE EXPERIENCES AND PERCEPTIONS OF CHILDREN AND YOUNG PEOPLE WITH OBESITY PARTICIPATING IN VIRTUAL EXERCISE SESSIONS

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Background Childhood obesity is a major public health concern. The causes of obesity within the paediatric population are multifaced, contributing to its complex management approach. Most children do not meet the recommended guideline of 60 minutes of physical activity a day. The COVID-19 pandemic has forced unprecedented restrictions on physical activity levels, in conjunction with national school and sport facility closures. This has greatly impacted patients with obesity, whose clinical management often involves physical exercise implementation. The pandemic has propelled the use of digital solutions, with virtual platforms becoming the main source of interaction and engagement. The perceptions of children with obesity who participate in virtual exercise sessions have not been studied. To optimize future weight management services, more information on the perceptions of children with obesity is needed. This project was conducted to determine whether virtual sessions are an acceptable method to increase activity levels among these children and young people.

Objectives To explore experience and perceptions of virtual exercise sessions among children and young people with obesity.

Methods Semi-structured telephone interviews were conducted on 6 patients with obesity who had participated in virtual exercise sessions. All interviewees were participants in virtual

exercise sessions ran by a tier three weight management service. The data was transcribed verbatim, reviewed by 2 independent researchers, and undergone thematic analysis.

Results Six children and young people (9 – 17 years old) were interviewed. The respondents preferred virtual exercise to traditional face to face exercise due to many reasons, primarily being able to exercise at home. Patients described previously lacking confidence to participate in traditional face to face exercise provisions and that the virtual sessions enabled them to participate in group exercise with cameras turned off. Patients were consistently motivated to join the virtual exercise sessions due to increased enjoyment upon participation. Children felt that both their activity levels increased and that virtual exercise sessions provided benefits to both their energy levels and sleep routine. Children identified whole family involvement via the virtual exercise sessions increased their enjoyment and assurance.

Conclusions Participants in weight management services benefit from attending virtual exercise sessions. This exploratory study highlights virtual sessions as a vital adjunct allowing patients with obesity to receive relevant input for physical activity. We need to however consider digital exclusion as a barrier for some families. Health professionals play a key role in not only delivering medical care to patients but also providing and promoting lifestyle support through new digital platforms. This qualitative study seems promising for enhancing physical activity engagement, but further research needs to be carried out to evaluate the effectiveness in weight management programmes.

Association of Paediatric Emergency Medicine

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UNEXPLAINED LIMP-AN 'INVESTIGATION-LIGHT' ALGORITHM IS SAFE AND EFFECTIVE

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Background The differential diagnoses of a child's unexplained limp is broad but the majority of cases are due to benign self-limiting conditions, the commonest being irritable hip (IH). Two decades of experience in our Paediatric Emergency Department (PED) led to concerns that there was an over-reliance on clinical investigations with emphasis placed on investigations rather than the clinical picture. An 'investigation-light' algorithm was designed to reduce unnecessary investigations for the majority of cases with self-limiting conditions, whilst still detecting those with significant pathology.

Objectives This was a retrospective analysis and diagnostic validation study of the limping child algorithm. The primary outcome was diagnostic accuracy of the algorithm. Secondary outcomes were safety and efficiency and (descriptive) demographics/epidemiology of limping children presenting to the PED.

Methods The study setting was a PED with 58,000 annual attendances. All limping or non-weight bearing children aged 1–16 years, presenting between Jan 2018 and Dec 2019 were included. Cases were selected who, following initial history and examination, had no clear diagnosis. Patients were

Abstract 1734 Table 1 Blood Investigations and diagnostic outcomes

Acute bloods	Irritable Hip cases	Significant Pathology cases	Total cases
CRP <20	46	1	72
CRP >20 (max 24)	23	1	
ESR <20	65	1	71
ESR 20–40	4	1	
ESR >40	2	0	
Normal WCC (age specific)	72	0	72
Raised WCC (age specific)	0	1	

identified from the electronic patient record/coding (EPR/C) system using triage data, free text and diagnostic codes. Data variables were extracted from the clinical notes and EPR/C system. The hospital wide patient administration system was also searched for any subsequent hospital attendances within 3 months to identify late presenting or missed diagnoses. Analysis was undertaken using R Studio.

Results We identified 662 cases, 21 were excluded as already under investigation for limp/very complex cases, leaving 641 cases. 64% Male, median age 4.8 years. Ninety-seven percent (n=624) had a benign self-limiting pathology (474 were IH). 17 significant diagnoses (2 Septic Arthritis, 2 Osteomyelitis, 1 Discitis, 6 Perthes, 6 SUFE) were found.

12.9% (n=83) had FBC, ESR and CRP; 1 child had FBC/CRP only (table 1). Of these patients, 72 (85%) were done at acute presentation and 13 (15%) at PED follow-up clinic.

265 cases had a radiological investigation (17 ultrasounds in total)

229 cases were reviewed in clinic. 7 cases had the diagnosis changed in clinic/reattendance. No significant cases were missed.

The diagnostic accuracy of the algorithm was 97.19% with a negative predictive value of 99.7%.

Conclusions The study showed that over 2 years the conservative limping child algorithm successfully identified 17 significant pathologies amongst the 641 cases of unexplained limp, whilst safely reducing the number of blood tests and radiological investigations. Clinicians still tended to over investigate (particularly x-rays in under 8yrs) and the analysis shows that these unnecessary tests did not add value. Inflammatory markers were not useful to either rule in or rule out significant pathology. The focus of an ED algorithm should be on thorough clinical history and examination to select the few cases that need further investigation and assessment.

British Paediatric Neurology Association

1735 EXPERIENCE OF CHILDHOOD STROKE MANAGEMENT IN A TERTIARY PAEDIATRIC NEUROLOGY UNIT

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Background Paediatric Stroke can have devastating consequences for those affected as well as their families. While there are guidelines from the RCPCH in initial management of suspected Stroke in children (2017), all steps may not always occur in practice. Efficiently managing a child with suspicion of a stroke and timely intervention required multi-disciplinary co-ordination, particularly in the first few hours of presentation, and can have an impact on outcome.

This study looked at how children with suspected stroke were managed at a tertiary hospital compared to guidelines, before setting recommendations for improvement in practice.

Objectives

Objective To review management of children with suspicion of stroke with respect to the Royal College of Paediatrics and Child Health (RCPCH) guideline on Stroke in children (2017).

Methods

Methods Children presenting with suspicion of stroke from January 2018 to June 2020 to tertiary neurology unit were identified. Medical records of these children were reviewed and data was collected on a proforma.

Data collected included time of onset of symptoms to presentation and/or transfer, signs and symptoms at presentation, Paediatric National Institute of Health Stroke Scale (PedNIHSS), initial investigations undertaken, time to first scan, treatment including thrombolysis, final diagnosis and outcome.

Results

Result 11 children were identified (Age range 1 year to 14 years; median 10 years). 6 children presented with acute hemiparesis, 2 with seizures and 1 with both; 1 presented with transient loss of consciousness and 1 was encephalopathic. 6 children presented within 4 hours of onset of symptoms, 2 between 4–12 hours and 3 presented more than 24 hours after symptom onset.

Only 1 child had a documented Paediatric National Institute of Health Stroke Scale (PedNIHSS) to assess stroke severity. 5 children had brain imaging within 1 hour of arrival. Arterial ischaemic stroke (AIS) was identified in 5 children, cerebral venous sinus thrombosis in 2, Moya Moya and haemorrhagic stroke in 1 each and 2 had stroke mimics. Out of 5 children with AIS (ages 1.7, 1.7, 11, 14, 14 years) 2 had known sickle cell disease, 1 neurofibromatosis and 1 was later diagnosed with restrictive cardiomyopathy. 3 of these children presented within 4 hours of symptom onset and only 1 could be considered suitable for thrombolysis. None of these children met the 4.5 hour criteria for consideration of thrombolysis. 2 children with AIS were started on aspirin and 3 were transferred over to quaternary unit including 1 for suitability of thrombectomy.

Conclusions

Conclusion PedNIHSS is not routinely used to assess severity of stroke. Majority were not able to get brain imaging within 1 hour of presentation. AIS was the most common cause of stroke; all but 1 had an underlying condition. Only 1 child could have been suitable for thrombolysis but there was a delay in establishing a stroke diagnosis.

This highlights the need for multidisciplinary collaboration between teams to expedite diagnosis and optimise management of these children, which can be facilitated by establishing a local stroke pathway.