encompassed psychiatric, psychological, psychosocial and behavioural consequences post-mTBI.

Results Electronic databases identified 577 journal articles, from which 11 studies were included in review. Based on literature, prevalence of inattention and conduct mean ratings increased in ages 10–13 with hospitalisation compared to those after outpatient clinic. Furthermore, 10% of children under 18 years with a history of multiple previous mTBIs, showed having significantly higher scores in emotionally reactive, withdrawn and aggressive problems compared to single or no mTBI history. Majority studies also found that that 35.7% of mild TBI group suffered new onset anxiety disorders compared to 11.4% in control group, particularly when patients had pre-existing psychiatric illness.

Conclusions Although the correlation between mTBIs and subsequent behavioural or psychological changes reached significance, there is still little evidence to support the true nature of this relationship. Ideally, future studies should identify the risk factors that may exacerbate post-head injury symptoms to ensure more holistic patient care. Moreover, detecting the persistence of psychiatric and/or behavioural changes long-term, rather than acute, would add greater significance to this correlation in children and adolescents following an mTBI.

Association of Paediatric Emergency Medicine

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IS THERE AN ASSOCIATION BETWEEN MILD TRAUMATIC BRAIN INJURY AND SUBSEQUENT BEHAVIOURAL AND/OR PSYCHOLOGICAL PROBLEMS IN CHILDREN UNDER 18 YEARS OF AGE?

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10.1136/archdischild-2021-rcpch.87

Background The incidence of paediatric mild traumatic brain injuries (mTBIs) diagnosed have increased exponentially within the past decade. Approximately 1.4 million people attend the emergency department (ED) due to mild head injury, within which 33–55% are children under 15 years. Once treated, the general practice is to acknowledge the emergence of medical post-concussive symptoms such as nausea or dizziness. Contrastingly, less so recognised are the behavioural changes that may arise, mainly due to lack of awareness regarding the myriad of possible outcomes. Thus, greater research regarding the association of behavioural and psychological changes following an mTBI are imperative to ensure follow-up after head injury is being conducted so holistic management can be achieved.

Objectives To conduct a literature review and investigate whether psychological or behavioural changes occur within children under 18 years proceeding mild traumatic brain injury.

Methods Six electronic databases searched for studies within the past 30 years for this literature review. Studies needed to meet the following criteria in order for selection: primary research studies, population age <18 years for both with mTBI and the control group (healthy children or those admitted for orthopaedic injury), 'mild' traumatic brain injury (loss of consciousness for <30 minutes and GCS 13–15) and

encompassed psychiatric, psychological, psychosocial and behavioural consequences.

Results Electronic databases identified 577 journal articles, from which 11 studies were included in review. Based on literature, prevalence of inattention and conduct mean ratings increased in ages 10–13 with hospitalisation compared to those after outpatient clinic. Furthermore, 10% of children under 18 years with a history of multiple previous mTBIs, showed having significantly higher scores in emotionally reactive, withdrawn and aggressive problems compared to single or no mTBI history. Majority studies also found that that 35.7% of mild TBI group suffered new onset anxiety disorders compared to 11.4% in control group, particularly when patients had pre-existing psychiatric illness.

Conclusions Although the correlation between mTBIs and subsequent behavioural or psychological changes reached significance, there is still little evidence to support the true nature of this relationship. Ideally, future studies should identify the risk factors that may exacerbate post-head injury symptoms for more holistic patient care. Moreover, detecting the persistence of psychiatric and/or behavioural changes long-term, rather than acute, would add greater significance to this correlation in children and adolescents following an mTBI.

British Inherited Metabolic Disease Group

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LESSONS FROM THE NEWBORN SCREENING FOR POMPE DISEASE: A SINGLE-CENTER UK EXPERIENCE BASED ON USA NEWBORN SCREENING PROGRAM

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10.1136/archdischild-2021-rcpch.88

Background Pompe disease is a rare genetic disorder caused by deficiency of alpha-glucosidase enzyme. The classical infantile form clinically presents in the first two months of life with myopathy and cardiomyopathy and is fatal in the first year of life if untreated. Enzyme replacement therapy (ERT) should be initiated as early as possible to improve outcomes through early identification of cases. Pompe disease can be identified by measuring alpha-glucosidase activity in newborn blood spot samples (NBS). Pompe disease is not included in the UK Newborn blood spot screening program, however babies resident on American military bases in the UK have their blood spot samples analysed in the USA by screening programmes that may include Pompe disease. Any abnormal screening results are followed up locally by UK paediatricians.

Objectives The aim of this study was to characterise the cohort of cases with increased risk of Pompe disease due to a positive initial newborn screening test.

Methods We have recorded the epidemiological, clinical, biochemical and genetic data of babies born at two local US Air Force bases and referred to CUH Metabolic outreach clinic in 2020 with increased risk of Pompe disease. NBS was undertaken by Maryland newborn screening laboratory.

Results Lymphocyte alpha-glucosidase activity was undertaken in four cases. Two cases had normal activity and no further investigations were undertaken. Two cases showed marginally