P009 THE NEED TO EDUCATE UNIVERSITY STUDENTS ABOUT SLEEP

¹Connor Qiu*, ²Yizhou Yu, ²Abdullah Cheema, ³Christopher-James Harvey, ²Mary Morrell.
¹St Mary's Hospital, Isle of Wight NHS Trust, Newport; ²Imperial College London, London; ³University of Oxford, Oxford

10.1136/bmjresp-2019-bssconf.9

Introduction Poor sleep hygiene negatively impacts cognitive and physical abilities in students and is common among students of higher education.¹ Moreover, a wide-range of literature explores the detrimental effect of poor sleep quality on learning.

Methods An anonymous, self-administered questionnaire was made available to a cohort of medical students at Imperial College London (n=113; 60 female). Demographic information was collected to determine existing sleep quality. Questions regarding understanding of, and desire for sleep hygiene interventions to improve their experience of medical education were created on a 5-point Likert scale, ranging from 5 (strongly agree) to 1 (strongly disagree). Students were also asked to rank, the aspects in their lifestyle that warranted the most attention for improvement.

Results Students from across all years strongly agreed that their sleeping habits could be improved (4.13 ± 0.86). Equipping students with the time and energy management tools needed to maintain consistent sleep of adequate duration would be well received (3.73 ± 0.97). Students agree that a concerted intervention effort, such as having sleep promotion activities across campus would be beneficial for their education (3.65 ± 0.90).

This study identified the main factors influencing sleep quality as the latency to fall asleep, sleep duration and frequency of dreams, together accounting for 29.0% (r^2) of the variation in sleep. The presence of a bed partner, pain, temperature, breathing problems and waking up at night did not significantly influence sleep quality.

Discussion University students would benefit from a comprehensive sleep education drive. Efforts in improving sleep quality could be directed to decreasing the latency to sleep onset and to increasing sleep duration via naps.

REFERENCE

1. Mah C D, Kezirian E J, Marcello B M, Dement W C. Poor sleep quality and insufficient sleep of a collegiate student athlete population. *Sleep Health* 2018;4 (3):251–257.

P010 DOES TONGUE REDUCTION SURGERY AFFECT SLEEP DISORDERED BREATHING IN PATIENTS WITH BECKWITH-WIEDEMANN SYNDROME?

Ansel Godinho*, Martin Samuels, Juling Ong, Kylie Russo, Francois Abel, Aidan Laverty.
 Great Ormond Street Hospital for Children NHS Foundation Trust, London, UK

10.1136/bmjresp-2019-bssconf.10

Introduction Beckwith-Wiedemann Syndrome (BWS) is a congenital condition where patients have macroglossia, often requiring tongue reduction surgery as well as being a potential risk factor for obstructive sleep apnoea (OSA). Prevalence of OSA is high and therefore sleep studies (SS) pre- and post-surgery are useful to assess the impact of surgery.

Method From 58 patients with BWS who underwent SS before or after tongue reduction surgery over a 20-year period, there were 9 patients who had tongue reduction

surgery plus a SS pre- and post-operatively with sufficient data to calculate an Apnoea Hypopnoea Index (AHI).

Results Figure 1 shows the change in Obstructive AHI (OAHI) before and after tongue reduction surgery in the 9 patients.

Discussion In our cohort with pre- and post-surgery SS data the prevalence of OSA was 44% (mild 100%). 4 patients showed reductions in OAHI after surgery (mean change: 1evs/hr), 3 others showed a worsening (mean change: 5.5evs/hr), while 2 showed no change in OAHI. Of the 3 that worsened, 1 was restudied after two years and showed no evidence of OSA with no medical intervention. Another had grade 2 tonsils which have been surgically removed. The third patient is waiting for ENT surgical review. The small sample size of BWS patients with sufficient SS to qualify for this study may be related to the referral pathway with the majority of patients diagnosed with moderate to severe OSA pre- surgery were either treated (e.g. tracheostomy) or surgery delayed due to OSA.

Abstract P010 Figure 1 OAHI data pre-and post-operatively

In conclusion, tongue reduction surgery does not appear to affect the level of OSA and patients who had worsening of OSA, had other factors in their history predominantly ENT related. An alternative method of assessment, such as a questionnaire, focussed on sleep disordered breathing, might be a better determinant of the impact of surgery.

P011 DEVELOPMENT OF AN ONLINE BEHAVIOURAL SLEEP INTERVENTION FOR PARENTS OF CHILDREN WITH EPILEPSY, FOR USE IN THE CASTLE (CHANGING AGENDAS ON SLEEP, TREATMENT AND LEARNING IN EPILEPSY) STUDY CLINICAL TRIAL

¹Luci Wiggs*, ¹Georgia Cook, ^{2,3}Harriet Hiscock, ⁴Paul Gringras. ¹Psychology Dept., Oxford Brookes University, Oxford, UK; ²Centre for Community Child Health, Murdoch Children's Research Institute; Health Services Research Unit, The Royal Children's Hospital, Melbourne, Australia; ³Department of Paediatrics, The University of Melbourne, Melbourne, Australia; ⁴Evelina London Children's Hospital, Guys and St Thomas's NHS Trust, UK

10.1136/bmjresp-2019-bssconf.11

Introduction Many of the same sleep problems experienced by children with epilepsy (CWE) are commonly seen in typically developing (TD) children. Behavioural sleep interventions (BSI) are commonly and successfully used to treat these sleep problems in TD children and in some neurodevelopmental disorder populations. BSI should therefore be effective in CWE. However, there are special seizure-related considerations for CWE and their parents which may need to be acknowledged in any BSI for this population. Through Patient and Public

Involvement (PPI), this project aimed to understand parents' opinions and experiences around their child's sleep and sleep interventions in order to tailor a BSI for use in the CASTLE (Changing Agendas on Sleep, Treatment and Learning in Epilepsy) study clinical trial with CWE.

Method Semi-structured interviews were conducted with 10 mothers of CWE and 3 CWE recruited via online adverts on epilepsy relevant websites. A thematic analysis was conducted on the interview data.

Results Several strong themes were apparent including that i) families felt in need of information, support and help with sleep, ii) parents valued other parents' experience/understanding (over professionals' advice), iii) any intervention needed to be personalised and non-prescriptive, and iv) parents' concerns needed to be included. Two theory-driven BSIs, used in evidence-based level 1 studies, were adapted to incorporate parents' requirements, developed into an online intervention (CASTLE Online Sleep Intervention or COSI) for parents of CWE and refined following parental evaluation (via online questionnaire built into COSI) until 100% approval from parents was reached.

Discussion Adaptations and additions to content and delivery format were necessary to ensure that COSI best met parents' needs; the final version will be used in the CASTLE study clinical trial (<http://castlestudy.org.uk/>). It is hoped that the use of evidence-based techniques delivered with consideration of factors identified through PPI, can increase parent-engagement and optimise effectiveness.

P012 A FEASIBILITY STUDY OF THE USE OF AN EXERCISE INTERVENTION TO IMPROVE WELL BEING USING A MOBILE APP FOR MONITORING PATIENT RELATED OUTCOMES IN CHILDREN WITH NARCOLEPSY

¹Rosalind Broe*, ²Janine Reynolds, ³Heather Elphick. ¹The Medical School, University of Sheffield, Sheffield, UK; ²Sheffield Children's NHS Foundation Trust, Sheffield, UK

10.1136/bmjresp-2019-bssconf.12

Introduction Narcolepsy is a chronic neurological condition in which the brain's ability to regulate the sleep-wake cycle is disturbed and can result in reduced quality of life (QOL). A positive association between exercise and QOL has been found in children. The aim of this study was to assess the feasibility

of implementation of an exercise intervention with a mobile app to monitor outcomes in children with narcolepsy.

Methods This feasibility study received service evaluation (SE1308), and University of Sheffield ethical approval (project number: 022995). A patient and parent engagement exercise to inform study design was carried out during the 'Sheffield Children's Hospital Annual Narcolepsy Family Day'. An exercise intervention was designed based upon NHS recommendations and tailored to the child's activity levels.¹ Weekly goals were set and progress was reviewed weekly, using an app specifically developed by Aparito Ltd (Wrexham, UK). QOL was monitored using the Pediatric Quality of Life Inventory (PedsQL). Patients were asked for feedback at the end of the intervention, to assess its feasibility and acceptability.

Results 117 children and parents took part in the engagement exercise. 12 patients took part in the feasibility study (mean age 12.9 years). The focus group highlighted the importance of motivation, timing and tailoring exercise interventions to the individual. Children said exercise should be fun to help motivation.

Average physical activity increased from 229 minutes to 254 minutes. Of those who had successfully increased their exercise, baseline average PedsQL score increased from 70.6 to 77.6 (figure 1). Feedback on the app and exercise intervention were both positive.

Conclusion This feasibility study has shown that a targeted exercise intervention can improve QOL in children with narcolepsy. The Aparito app, it is being developed further for children with narcolepsy.

REFERENCE

1. Health Survey for England 2015: *Physical Activity for Children*

P013 A NURSE-LED BEHAVIOURAL SLEEP PROGRAMME CAN REDUCE MELATONIN PRESCRIBING

Aditi Sivaramakrishnan, Janine Reynolds*, Rosalind Broe, Ruth N Kingshott, Heather E Elphick. Sheffield Children's NHS Foundation Trust, Western Bank, Sheffield, UK

10.1136/bmjresp-2019-bssconf.13

Introduction Many children with sleep difficulties are prescribed melatonin. However, melatonin is costly and evidence for its efficacy is limited. The aim of this study was to

Abstract P012 Figure 1 Average Baseline and Post-intervention PedsQL Scores (Successful Interventions)