Results: The median (IQR) age of the children in snoring group (n= 11) was 8.0 (11.0) and the median (IQR) age of the children in non-snoring group (n= 21) of children was 8.0 (5.0). Though there was no statistically significant difference in the age of both the groups (p value = 0.938, Mann Whitney U test), we found a statistically significant difference in total score of the modified RCBQ between the snoring and non-snoring group of children (p value = < 0.001, Mann Whitney U test).
Conclusions: This study shows that in children with snoring due to adenoid hypertrophy there exists a significant increase in behavioural effects such as restlessness, irritability, thumb sucking, disobedience and a lack of concentration. These behavioural effects may be detrimental to the child's development and thus may be considered as an indication for early surgical management of snoring and open mouth breathing in children with adenoid hyperplasia.
Acknowledgements: 1. Michael Rutter, Institute of Psychiatry, Maudsley Hospital, London - 1967.

Sleep Breathing Disorders
SURGICAL MANAGEMENT OF OSAHS - OVERCOMING CHALLENGES IN SLEEP SURGERY IN A DEVELOPING COUNTRY

B. Choudhury, A.K. Verma. *Otorhinolaryngology, All India Institute of Medical Sciences, Jodhpur, India*

Introduction: The protocol of using Nasal CPAP as the Gold standard treatment of OSAHS is being followed worldwide. However in certain situations Surgery is indicated.
In addition to known common issues that merit Surgery such as Non-Compliance etc. in third world countries, an additional challenge is for the patient finding the funds for the procurement of the CPAP machine. These patients often need to be offered sleep surgery after proper counselling regarding their expectations from sleep surgery - in spite of having benefitted with a Nasal CPAP during trial. They opt in for surgery as this is the affordable option for them.
At our tertiary care institution in Western India, sleep surgery is being done for patients presenting with OSAHS with either non-compliance or, inability to afford the CPAP machine. A chronic problem we face is patients being lost to follow up and a desire to avoid any investigations once surgery is completed, unless there are complications. In view of this other modalities are needed to monitor these patients.
Materials and methods: 15 patients who have undergone or, are to undergo sleep surgery (Z-palatopharyngoplasty and Radiofrequency Ablation of the Soft palate, lateral pharyngeal wall and Base of tongue) are being assessed. These are diagnosed OSAHS patients confirmed by Polysomnography and are either Nasal CPAP non-compliants or, too poor to afford a Nasal CPAP machine. The patients submitted answers to two questionnaires- the Epworth Sleepiness Scale (ESS) and the STOP-BANG. A Visual Analog Scale (VAS) was also used to assess the subjective feelings of improvement, if any. All patients underwent Drug induced sleep endoscopy (DISE) to enable surgical decision using the VOTE classification. 7 patients have undergone surgery in the form of Z-palatopharyngoplasty and/or Radiofrequency Ablation of the Soft palate, lateral pharyngeal wall and Base of tongue.8 patients are within the 3 month follow up period and will be evaluated once that period is complete.
Results: Post-operative Polysomnography not possible in these patients as they cannot afford a second PSG, however the Comparison between pre and post op STOP-BANG and ESS scores shows specific improvements following surgery. The results were subjected to the Wilcoxon Signed Rank Test. THE STOP-BANG Showed a change from 4 to 2 (p=0.027), the ESS changing from 9.0 to 3.0 (p=0.027) and the VAS showed a change from 33.0 to 20.0 (p=0.061).
Conclusions: This preliminary report suggests that utilisation of the VAS, ESS and STOP-BANG as tools for diagnosing, monitoring, and follow up of patients unwilling to undergo a second Polysomnography is a possibility which needs to be further explored. Initial results indicate that these can be aids in the assessment of surgical outcomes, however further case series are required in order to perform optimal statistical analysis of the same.
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Chronobiology/Circadian Disorders
QUANTITATIVELY DECODING THE CIRCADIAN TRANSCRIPTIONAL REGULATIONS: AN ADVANCED APPROACH IN SLEEP MEDICINE

D. Chowdhury [1,2], C. Wang [1,2], A. Lu [1,2], H. Zhu [1,2]. [1] *HKBU Institute for Research and Continuing Education, Shenzhen, China;* [2] *Institute of Integrated Bioinformedicine and Translational Science, School of Chinese Medicine, Hong Kong Baptist University, Kowloon Tong, Hong Kong*

Introduction: The day-to-day physiologies are largely influenced by circadian rhythms. Disruption of such rhythms is associated with many diseases. Among which the circadian rhythms disrupted sleep disorders (CRSDs) have become a global psycho-social and public health issues. It is also linked with many moderate-to-severe life-threatening diseases.
Adjusting the disturbed circadian rhythms to a healthy one can be promising to treat CRSDs. However, the regulations underlying the circadian rhythms are much complicated and systematic. It may involve thousands of genes. Temporal recruitment of core-clock proteins, different transcriptional and translational regulators and chromatin modifications are imperative towards a comprehensive understanding of the spatio-temporal regulation of such complex rhythms. Despite many experimental affirmations about the circadian transcriptional controls, there is still an interesting question remains unexplored that how do these few components belonging to the same molecular architecture are capable to govern such divergent gene expressions? Nevertheless, how they are being regulated and their regulatory logics have not gained any inclusive attention yet. Thus, a systematic understanding considering all-encompassing circadian TFs and their relational interplay could help us to unleash their potential to therapeutically modulate the circadian rhythms. Experiments alone are indeed quite challenging to achieve this.
Interestingly, several studies indicated the knockout of the circadian transcriptional factors (TFs) results in changing the rhythms. And, rescuing them helps to regain the circadian functionality substantially. However, knocking out all possible combinations of circadian TF-genes experimentally is merely very tedious, time-consuming and expensive. Also, some essential genes cannot be knocked out. Besides, another challenge is not yet well elucidated before, could be enlightened using our study. The CRSDs are mostly diagnosed with delayed or advanced phase shifts of the individual's circadian rhythms, knowingly, delayed sleeping phase syndrome (DSPS) or advanced sleeping phase syndrome (ASPS) respectively. Advanced sleep-medicine must demand to adjust those misaligned rhythms. But, how to adjust those misaligned rhythms triggering at the molecular level is still a big challenge to be resolved. Theoretically, some extent of molecular level discrepancies among the DSPS and ASPS can be perceived. Hence, aligning the disturbed rhythms by means of advancing the phase in DSPS and delaying the phase-in ASPS to achieve the rightly aligned circadian rhythmicity to treat CRSDs, the recommendations for molecular targets for therapeutic interventions must be different in both conditions. Thus, the real challenge is not only aligning the rhythms but also, having a strong understanding of the directionality of the alignment varying in different clinical contexts is the most crucial.
Therefore, to address these ambiguities, a quantitative understanding of the circadian gene regulation and the molecular interplay among the key regulators are quite important. Here, we introduced a computational approach, to decode the quantitative transcriptional regulatory landscapes of circadian genes. Based on which, we were able to engineer the molecular regulators underpinning the circadian rhythms. This potentially indicates a clue towards adjusting the circadian rhythmic phases in desired directions depending on clinical requirements.

Technology/Technical
VALIDATION OF AN EYE MOVEMENT DETECTOR AND INTER-RATER VARIABILITY OF THE MANUAL SCORING OF DIFFERENT TYPES OF NOCTURNAL EYE MOVEMENTS

F. Pizza [1,2], M. Cesari [3,4], E. Antelmi [1,2], H. Leonthin [3], M. Nikolic [3], G. Plazzi [1,2], P. Jennum [3], J. Christensen [3,4]. [1] *Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy;* [2] *IRCCS Instituto delle Scienze Neurologiche di Bologna, Bologna, Italy;* [3] *Danish Center for Sleep Medicine, Department of Clinical Neurophysiology, Rigshospitalet Glostrup,*