

50

A QUALITATIVE STUDY OF PUBLIC ONLINE DISCUSSION FORUMS: EXPLORING PARENTS' CONCERNS ABOUT CHILDREN'S SLEEP PROBLEMS AND VIEWS ABOUT ONLINE, COMMUNITY AND PRIMARY CARE SUPPORT

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Introduction Chronic insomnia is common in children. Behavioural interventions are effective.¹ A systematic review (pending publication) revealed UK research about primary healthcare (PC) management is limited. Parents seek advice online,² however, no published research to date has explored parents' discussions online about PC management. This qualitative study explored (in online discussions) parents' concerns/expectations about children's sleep problems, awareness of online, PC, and community management resources, and perceptions of management within PC.

Methods Two public online discussion forums were searched for parents' discussions about children's sleep problems. Eligible threads were analysed with Braun and Clarke's reflexive thematic analysis.

Results Ninety-three threads were included.

Five main themes were developed. Parents had many 'concerns about children's sleep problems' and were emotional/practical support for one another: 'parents experiences or sharing advice online as a resource'. Parents expressed little regarding PC but had 'mixed experiences and perceptions of community-based PC professionals' and 'limited experiences and perceptions of general practice'. They often discussed 'other resources for supporting parents with child sleep problems' (e.g. apps, private sleep consultants).

Discussion Parents may have unmet management needs, act as resources for one another, and use non-healthcare resources, however the accuracy of these resources must be explored. The management of chronic insomnia within PC specifically must be further explored.

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51

DOES SIMULTANEOUS TONIC AND PHASIC REM SLEEP WITHOUT ATONIA PREDICT PHENOCONVERSION TO OVERT NEURODEGENERATIVE DISEASE IN IDIOPATHIC REM SLEEP BEHAVIOUR DISORDER?

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Introduction Idiopathic rapid eye movement behaviour disorder (iRBD) is a strong predictor for alpha-synucleinopathies including Parkinson's disease. In this study, we examined whether the percentage of REM sleep without atonia (RSWA)

during polysomnography (PSG) can predict phenoconversion to neurodegenerative disease in idiopathic REM sleep behaviour disorder (iRBD).

Methods Patients with PSG-confirmed iRBD, including those that phenoconverted during follow-up after diagnosis and those that remained free of neurodegeneration, were identified from an existing database. Tonic, phasic, mixed and "any" RSWA activity from the mentalis, tibialis anterior and flexor digitorum superficialis muscles was analysed. Demographic, clinical, PSG and RSWA variables were compared between converters and non-converters. RSWA cut-offs predicting phenoconversion were established using receiver operating characteristic analysis.

Results Six (46%) patients developed parkinsonism (n = 4) or Lewy Body dementia (n = 2). Phenoconverters had significantly higher percentages of RSWA at iRBD diagnosis than non-converters (p = 0.04). Optimal cut-off values to predict phenoconversion were 59.2% for "any" (mentalis) RSWA (67% sensitivity; 100% specificity) and 0.26% for tonic without mixed RSWA (83% sensitivity; 100% specificity), with respective area under the curve values of 0.857 and 0.905.

Discussion Patients with an increased percentage of RSWA at iRBD diagnosis were shown to have an increased risk of subsequent neurodegenerative disease. Recent changes to the AASM Manual for Scoring Sleep and Associated Events (v2.6) state that reporting a RSWA index using SINBAR criteria is optional; this study provides further evidence for the value and clinical relevance in producing and reporting a RSWA index.

52

CPAP COMPLIANCE FOR OSA SYNDROME: PRE AND POST COVID-19 – A SINGLE CENTRE, RETROSPECTIVE STUDY

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COVID-19 pandemic changed the mode of service delivery for Obstructive sleep apnoea (OSA) patients. Decisions related to the interventions, including Continuous Positive Airway Pressure (CPAP) were taken in telephone clinics compared to conventional face to face appointments.

Aim To look at the impact of new service mode delivery on OSA syndrome management.

Study Population and Methods Patients were randomly selected from all newly diagnosed OSA cases attending sleep and ventilation clinic. One hundred ten patients were selected in the Pre-COVID group (June 2019 to February 2020) and 98 in the Post-COVID (June 2020 to January 2021).

Compliance reports were generated 30 days post CPAP trial. Demographic and clinical data were analysed. Mann-Whitney U and ANOVA tests were used for nonparametric data, and chi-square test for parametric data.

Results CPAP compliance (measured as% of CPAP usage >4 hours/night) on 30 days data were slightly higher in post-COVID group (median 57.0, IQR 85) compared to pre-COVID group (median 38.5, IQR 69); p= 0.141. Average hours of CPAP usage were significantly higher in the post-COVID group (median 4.46, IQR 5.40) than the pre-COVID group (median 3.02, IQR 5.06); p-value 0.034 (table 1). There were trends supporting better compliance among female

Abstract 52 Table 1 CPAP compliance (% of usage >4 hours per night) and average hours of CPAP use per night in both study groups

		Number of patients	Median	IQR	P value
CPAP compliance (in %)	Pre- COVID group	110	38.50	69	0.141
	Post- COVID group	98	57.00	85	
Average CPAP use (in hours)	Pre- COVID group	110	3.02	5.06	0.034
	Post- COVID group	98	4.46	5.40	

Abstract 52 Table 2 CPAP compliance (% of CPAP usage >4 hours/night) across the categories

		Pre- COVID group			Post- COVID group		
		Median	IQR	P value	Median	IQR	P value
Gender	Male	36.0	61	0.48	55.0	84	0.99
	Female	50.0	77		70.0	87	
Ethnicity	British white	47.0	70	0.119	63.0	77	0.347
	BAME	36.5	69		24.5	74	
	Other white	25.0	42		80	80	
	Not stated	10.0	32		25.0	93	
Anti-depressant	Not on antidepressants	32.0	63	0.03	55.0	85	0.94
	On antidepressants	69.0	71		63.0	76	
Daytime sleepiness	ESS ≤ 10	27.5	51	0.049	63.0	81	0.722
	ESS > 10	51.0	74		42.0	90	
OSA severity	Mild OSA	22.0	50	0.08	78.0	97	0.694
	Moderate OSA	27.0	63		57.0	92	
	Severe OSA	55.5	76		51.0	71	

patients, British white ethnicity and those with moderate and severe OSA, but this did not reach any statistical significance. Compliance was significantly high in patients with high ESS and those on an antidepressant in the Pre-COVID group ($p=0.049$ and 0.03 , respectively). Twelve patients returned CPAP among pre-COVID ($n=110$) compared to 14 of post-COVID ($n=98$) ($p=0.531$) (table 2).

Conclusion The study showed CPAP compliance of telephonic clinic consultation was slightly better compared to conventional clinic consultation. This new virtual clinic model can be adopted successfully during the challenging COVID times.

53

PSEUDO-OBSTRUCTIVE EVENTS IN SPINAL MUSCULAR ATROPHY AS A POTENTIAL MARKER FOR DISEASE PROGRESSION

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Introduction Sleep disordered breathing (SDB) is common in children with spinal muscular atrophy (SMA) as a result of respiratory muscle weakness. However, SDB events are currently scored according to criteria created for healthy children.

SCORING PSEUDO-OBSTRUCTIVE EVENTS

*Please score as a pseudo obstructive events if the following is correct:

- Reduction by at least 30% in the nasal flow/nasal thermistor
- No phasic difference in breathing pattern pre and post event (i.e. paradox is present pre and post event)
- Reduction in the thorax and abdomen band amplitude
- No increase in effort as the respiratory event progresses
- No breakout/large breath following the respiratory event
- No inspiratory flattening of the nasal pressure

*Adapted from Chacko A. et al. Sleep Medicine 2020 68 (2020) 124e130

Abstract 53 Figure 1

This study aims to add to previous evidence^{1,2} that SMA type II patients have respiratory events (we defined them as 'pseudo-obstruction') which do not conform to the current AASM guidelines for obstructive or central events. They are the result of paradoxical breathing and REM-related shallow breathing.

Methods Respiratory events were defined as either 'obstructive apnoea' (OA), 'central apnoea' (CA), 'central hypopnoea' (CH), 'obstructive hypopnoea' (OH) as per AASM guidelines. We additionally defined the criteria for 'pseudo-obstruction' (PO) based on previous publications (figure 1).¹

Trained sleep physiologists were provided 8 'test' epochs randomly chosen from either SMA II or other patients. Physiologists were asked to designate the respiratory events they deemed most appropriate for each epoch, blind to diagnosis of the patient. Interscorer reliability tests were performed against the gold standard for each event.

Results The average concordance with the gold standard was 75% overall. It was mildly reduced to 67% when looking specifically at POs.

We are currently evaluating whether disease progression is associated with an increase in POs by looking at subsequent yearly sleep studies of 10 SMA II and 1 SMA I patient, self-ventilating in room air, across a 3-year period.

Discussion Future efforts will aim to look more closely at inter scorer reliability. Recognising these pseudo-obstructive events may influence treatment.² Additionally, if these events correlate along the motor and respiratory deterioration, they can be used as markers of response to overnight ventilation and, more importantly, to new available treatments.

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54

SLEEP SPINDLES AS A BIOMARKER FOR ALPHA-SYNUCLEINOPATHIES IN RAPID EYE MOVEMENT (REM) BEHAVIOUR DISORDER (RBD)

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Introduction Idiopathic rapid eye movement behaviour disorder (iRBD) is a strong predictor for the development of alpha-synucleinopathies. Electroencephalographic (EEG) oscillations known as sleep spindles are found during non-rapid eye movement sleep. These bursts of neural oscillatory activity are