



SLEEP MEDICAL CENTER

Polysomnogram Report Part I

Phone: (919) 477-1588

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Patient Name: XXXXX, XXXXX **Acquisition Number:** XXXX
Date of Birth: XX/XX/XX **Acquisition Date:** XX/XX/XX
Referring Physician: Dr.

History: The patient is a 45 year old female with obstructive sleep apnea for CPAP titration. Medical History: HTN, depression, high cholesterol, thyroid disorder.

Medications: Synthroid, Calcium, Fish Oil Omega 3, Vitamins, Aspirin, Citalopram, Pravastatin, Hyzaar, Zinc.

Procedure: This routine overnight polysomnogram was performed on the Alice 4 or 5 using the standard CPAP/BIPAP protocol. This included 6 channels of EEG, 2 channels of EOG, chin EMG, bilateral anterior tibialis EMG, nasal/oral thermister, PTAF (nasal pressure transducer), chest and abdominal wall movements, EKG, and pulse oximetry.

Description: The total recording time was 361.0 minutes. The total sleep time was 265.0 minutes. There were a total of 63.5 minutes of wakefulness after sleep onset for a reduced sleep efficiency of 73.4%. The latency to sleep onset was slightly prolonged at 32.5 minutes. The R sleep onset latency was within normal limits at 111.0 minutes. The patient had an early morning awakening at 4:21 am without returning to sleep and then ended the recording at 5 am. Sleep parameters, as a percentage of the total sleep time, demonstrated 8.9% of sleep was in N1 sleep, 60.6% N2, 17.4% N3 and 13.2% R sleep. There were a total of 103 arousals for an arousal index of 23.3 arousals per hour of sleep that was elevated.

Overall, there were a total of 19 respiratory events for a respiratory disturbance index, which includes apneas, hypopneas and RERAs (increased respiratory effort) of 4.3 respiratory events per hour of sleep during the pressure titration. CPAP was initiated at 4 cm of H₂O at lights out. It was titrated in 1 cm increments to the final pressure of 10 cm of H₂O at 1:29 am. The pressure was increased mostly due to moderate snoring with occasional respiratory events to 9 cm. As the patient entered REM sleep in the supine position, there were frequent hypopneas. The pressure was then increased quickly to 10 cm. At this pressure there were only rare hypopneas during REM sleep. There was only occasional snoring while supine.

Additionally, the baseline oxygen saturation during wakefulness was 96%, during NREM sleep averaged 96%, and during REM sleep averaged 95%. The total duration of oxygen < 90% was 0.1 minutes.

Cardiac monitoring- did not demonstrate transient cardiac decelerations associated with the apneas. There were no significant cardiac rhythm irregularities.

Periodic limb movement monitoring- demonstrated that there were 82 periodic limb movements for a periodic limb movement index of 18.6 periodic limb movements per hour of sleep.

Impression:

This patient's obstructive sleep apnea demonstrated significant improvement with the utilization of nasal CPAP. The pressure was increased to the final pressure of 10 cm due to snoring and REM related hypopneas. There were only rare respiratory events during REM sleep at the final pressure and snoring was minimized.

There was an elevated periodic limb movement index of 18.6 periodic limb movements per hour of sleep. PLMs were also observed on the prior baseline PSG. Separate treatment would be suggested to help improve sleep continuity.

Recommendations:

Would recommend utilization of nasal CPAP at 10 cm of H₂O using a Res Med Quattro Full Face mask, size Small. Chin strap used during study- no. Humidifier used during study- no.

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Electronically reviewed and digitally signed

SLEEP MEDICAL CENTER**Polysomnogram Report****Part II**

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Patient last name	XXXXXXXX	Type	Adult	Acquisition	XXXX
Patient first name	XXXXXX	Weight	165	Started	XX/XX/XX at 10:50:46 PM
Birth date	XX/XX/XX	Height	62	Stopped	XX/XX/XX at 5:01:46 AM
Age	45	BMI	30.18	Duration	361.0

Sleep Data

Lights Out:	10:57:46 PM	Sleep Onset:	11:30:16 PM
Lights On:	4:58:46 AM	Sleep Efficiency:	73.4 %
Total Recording Time:	361.0 min	Sleep Latency (from Lights Off)	32.5 min
Total Sleep Time	265.0 min	R Latency (from Sleep)	111.0 min
Sleep Period Time:	291.5 min	Total number of awakenings:	15
Wake during sleep:	26.5 min	Wake After Sleep Onset (WASO):	63.5 min

Sleep Data**Arousal Summary**

Stage	Latency from lights out (min)	Latency from sleep onset (min)	Duration (min)	% Total Sleep Time	Normal values		NREM	REM	TOTAL
						Spontaneous	70	2	72
						Respiratory Event	5	1	6
N 1	33.0	0.5	23.5	8.9	(5%)	Resp. Event w/ Desat	0	0	0
N 2	34.0	1.5	160.5	60.6	(50%)	Limb Movement	24	0	24
N 3	52.5	20.0	46.0	17.4	(20%)	Snore	1	0	1
R	143.5	111.0	35.0	13.2	(25%)	TOTAL	100	3	103
						INDEX	26.1	5.1	23.3

Respiratory Data

	CA	OA	MA	Apnea	Hypopnea*	A+H	RERA	Total
Number	0	0	0	0	9	9	10	19
Mean Dur (sec)	0.0	0.0	0.0	0.0	19.9	19.9	16.1	17.9
Max Dur (sec)	0.0	0.0	0.0	0.0	33.5	33.5	27.0	33.5
Total Dur (min)	0.0	0.0	0.0	0.0	3.0	3.0	2.7	5.7

% of TST	0.0	0.0	0.0	0.0	1.1	1.1	1.0	2.1
Index (#/h TST)	0.0	0.0	0.0	0.0	2.0	2.0	2.3	4.3

*Hypopneas scored based on 4% or greater desaturation.

Sleep Stage

	REM	NRE M	TST
AH	10.3	0.8	2.0
RD	12.0	3.1	4.3

Body Position Data

	Time In Position (min)	AHI/ho ur	RDI/ho ur
Up			
Supine	110.90	4.33	7.57
Prone			
Left side	80.90	0.74	3.00
Right Side	73.20	0.00	0.80

Snoring

Total number of snoring episodes	10
Total time with snoring	1.1 min (0.4 % of sleep)

Oximetry Distribution

	WK	REM	NREM	TOTAL
Average (%)	96	95	96	96
< 90%	0.0	0.1	0.0	0.1
< 80%	0.0	0.0	0.0	0.0
< 70%	0.0	0.0	0.0	0.0
# of Desaturations*	0	3	0	3
Desat Index (#/hour)		5.1	0.0	0.7
Desat Max (%)	0	7	0	7
Desat Max Dur (sec)	0.0	22.0	0.0	22.0
Approx Min O2 during sleep				88
Approx min O2 during a respiratory				90
Was Oxygen added (Y/N) and final r	No:			0 LPM

*Desaturations based on 4% or greater drop from baseline.

Cheyne Stokes Breathing: None Present

Heart Rate Summary

Average Heart Rate During Sleep	67.8 bpm
Highest Heart Rate During Sleep	82.6 bpm
Highest Heart Rate During Recording (TIB)	94.5 bpm

Heart Rate Observations

Event Type	# Events	
Bradycardia	0	Lowest HR Scored: N/A
Sinus Tachycardia During	0	Highest HR Scored: N/A
Narrow Complex	0	Highest HR Scored: N/A
Wide Complex Tachycardia	0	Highest HR Scored: N/A
Asystole	0	Longest Pause: N/A
Atrial Fibrillation	0	Duration Longest Event: N/A

Other Arrhythmias	No	Type:
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Periodic Limb Movement Data (Primary legs unless otherwise noted)

Total # Limb Movement	82	Limb Movement Index	18.6
Total # PLMS	82	PLMS Index	18.6
Total # PLMS Arousals	24	PLMS Arousal Index	5.4
Percentage Sleep Time with PLMS	39.5min (14.9 % sleep)		
Mean Duration limb movements (secs)	1184.3		

Brief Summary:			
Starting pressure:	4 cm of H2O	Maximum Pressure:	10 cm of H2O
Mask Type:	Res Med Quattro Full Face	Mask Size:	Small
Humidifier used:	no	Chin Strap used:	no
CFlex:	0	BiFlex:	0

