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INITIAL SLEEP EVALUATION

PATIENT:

DATE:

SCHNEIDER, Dale

10-28-93

MR#: REF.PHYS: 72-60-04

B. Schwartz, M.D.

SLEEP HISTORY:

Mr. Schneider is a 36 year-old married financial controller who was referred by Dr. Schwartz for the evaluation of loud interrupted snoring and excessive daytime sleepiness. History is obtained from the patient as well as a completed sleep/wake questionnaire. A sleep observer questionnaire is not available.

Mr. Schneider states that he underwent polysomnography at Kaiser Medical Center on Sunset Boulevard in 1986, during which obstructive sleep apnea was identified. He recalls that he was told that he had apneas approximately 30 times per hour with an average duration of about 90 seconds. He underwent therapy with a tonsillectomy and an uvulopalatino-pharyngoplasty (UPPP). No follow-up sleep study was performed. The patient states that he felt better right away, and his wife noted less snoring, the snoring essentially disappearing until about one year later when it recurred and which has progressed since that time. Approximately one year ago he states that his wife suspected recurrence of his sleep apnea, again noticing snoring with pauses in his breathing. He states that he gained about 25 pounds over that period of time, which may have aggravated his sleep apnea. He recently has started a weight reduction program, having lost about 5 pounds.

Review of his sleep habits reveals that his bedtime is erratic, partly because he goes to night school two nights a week. He has a general wake time of about 05:45 a.m., later on weekends, feeling that he accomplishes between 6-7 hours of sleep at night. Once asleep, his wife has apparently described loud snoring with pauses in his breathing, the snoring causing her to sleep in another room. He has no history of parasomnias. He states that he dreams every night and denies any sleep paralysis or cataplexy but on occasion has noted a hypnagogic hallucination. There is no family history of sleep disorders. When the patient awakens, he notes a dry mouth which he attributes to his snoring, and has a headache both when he awakens and during the day. He has noted an increased amount of drooling on his pillow particularly since the UPPP was performed.

As his day progresses, he states that he is not fully awakened until about 1:00 p.m., as he does not awaken refreshed. He basically feels tired "all the time", and notes that he fights sleepiness in soporific situations, such as in conversation at work, staff meetings and during driving as well. He states that he had an accident because of sleepiness prior to his surgery and notes that his sleepiness with driving is less severe at present. He states he no longer watches television because he readily falls asleep.

The patient has gained weight as was indicated. He does not smoke. He drinks approximately 4 alcoholic beverages per week during the evening. He drinks 5 cups of coffee a day. He is on Lopressor for hypertension since April of this year.

REVIEW OF SYSTEMS:

The patient denies any problem of chronic stuffy nose or sinus congestion.

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He has had no chronic cough, shortness of breath or wheezy breathing. He has had no problem of irregular pulse or chest pains. He has recurrent heartburn, but states this does not disturb his sleep. He denies any musculoskeletal complaints and has no urinary symptoms.

PAST MEDICAL HISTORY:

The patient had hernia repair in the past and arthroscopic surgery of his shoulder. He had a cyst removed from both legs and his back, and underwent a scrotal fixation of his testicles. He also underwent tonsillectomy and UPFP. He has had hypertension since April of 1993 and is also suffering from migraine headaches.

LIMITED PHYSICAL EXAM:

Height 67", weight 188 lbs. Pulse 80 and regular. BP 164/90. In general this is a well-developed slightly obese middle-age male who appears mildly sleepy. ENT examination reveals mild inflammation of his nasal mucosa. His mouth reveals the results of his UPPP surgery. His tongue appeared normal as did his jaw with no evidence for TMJ dysfunction. There was no cervical adenopathy, and his thyroid was normal to palpation.

ASSESSMENT:

Mr. Schneider has obstructive sleep apnea identified by polysomnography in 1986, and which was treated by uvulopalatinopharyngoplasty. These records will be sought. This treatment brought subjective improvement, but his symptoms of loud snoring and daytime sleepiness have gradually recurred over the ensuing years, and he feels that the problem has recurred. This will be pursued further by all-night polysomnography, with consideration of beginning treatment with a therapeutic trial of continuous positive airway pressure (CPAP) by nasal mask, depending upon the results of the sleep study. Other treatment options for sleep apnea were reviewed with the patient, more details to follow his sleep study. In the interim, he was advised to avoid driving while sleepy, and to avoid alcohol, as this can aggravate sleepiness and can aggravate sleep apnea.

IMPRESSION:

Obstructive sleep apnea syndrome, status post-UPPP. 780.53-0 (ASDA B.4.a).

Paul A. Selecky, M.D. Diplomate, American Board of Sleep Medicine

PAS/sg T: 11-07-93

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POLYSOHNOGRAPHY REPORT SPECIAL PROCEDURE: CPAP

NAME: SCHNEIDER, Dale SEX: M DATE: 11-30-93
MR#: 72-60-04 AGE: 37 START TIME: 22:45
PHYS: B. Schwartz, M.D. HT(in): 67" WAKE TIME: 08:05
SLF#: 93-284 WT(lbs): 188 START BP: 138/94
WAKE BP:130/94

FINAL DIAGNOSIS: Obstructive sleep apnea syndrome, moderately severe, improved with continuous positive airway pressure (CPAP) at 7cm H20 by nasal mask. 780.53-0 ASDA B.4.a).

PARAMETERS MONITORED: Central and occipital electroencephalograms, right and left electrococulograms, chin electromyogram, electrocardiogram (Lead II), right and left anterior tibialis electromyogram, respiratory effort by chest movement, respiratory effort by abdominal movement, oronasal airflow, and oxygen saturation by oximetry.

PROCEDURE: The study was conducted for 5.6 hours under normal conditions. The last 3.4 hours of the study were performed with the patient wearing a nasal CPAP system with a pressure of 3 to 7 cm of water. The study was completed on 7 cm of water pressure.

SUBJECTIVE OBSERVATIONS: At the beginning of the study, the patient felt wide awake. He estimated sleep onset took 15 minutes, and that once asleep, 8 hours of sleep were obtained with 5 short arousals. Sleep quality was worse. In the morning the patient felt alert and wide awake.

SLEEP	DATA Before CPAP	L	After CPAP]
Total Recording Time (TRT) Total Sleep Time (TST) Sleep Onset Latency First REM Latency Latency to Persistent Sleep Waking After Sleep Onset Number of REM Periods Number of Awakenings > 1 minute	337.0 min 181.0 min 24.5 min 295.0 min 86.0 min 130.5 min 1		204.0 min] 108.0 min] 23.0 min] 117.5 min] 30.5 min] 72.5 min] 1 7 59.7%
Sleep Efficiency Index Brief Arousals Associated with Respiratory Disturbances Respiratory Arousal Index (RAI)	169 56.0	[30] 16.6]
Brief Arousals Associated with Leg Movements Periodic Leg Movement Arousal I Brief Arousals Associated with Unknown Origin	none ndex none	[4] 2.2]
	none	٤	6]

SLEEP STAGES

	Before CPAP		[After CPAP]	
	Minutes	(%TST)	<u>[Minutes </u>	(}TST)]
Stage 1	51.0	478	[19.0	18%]
Stage 2	45.5	42%	[73.0	67%]
2007 (Architecture 1 - Cont.) 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	none		7 9.5	9%]
Stage 3-4	11.5	11%	ř 6.5	6%]
REM		77.	(95.5	Ì
WAKING	155.0		1 ,0.0	•

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FOLLOW-UP SLEEP DISORDERS EVALUATION

SCHNEIDER, Dale PATIENT:

MR#: 72-60-04 REF.PHYS: B. Schwartz, M.D. 12-30-93 DATE:

Mr. Schneider returns for follow-up after having undergone all-night polysomnography on 11-30-93 for the treatment of loud interrupted snoring and excessive daytime sleepiness. The patient carries a diagnosis of obstructive sleep apnea previously identified in 1986 and treated with a tonsillectomy and uvulopalatinopharyngoplasty. He initially noted an improvement in his sleep and daytime functioning, but had noted a recurrence of loud snoring and excessive daytime sleepiness about a year later until the present.

The sleep study on 11-30-93 revealed moderate obstructive sleep apnea with approximately 55 respiratory disturbances per hour of sleep. The study was interrupted for a therapeutic trial of continuous positive airway pressure (CPAP) by nasal mask, which was successful at significantly reducing the number of respiratory disturbances.

Since that study, the patient has been utilizing CPAP at home on a nightly He noted repeated awakenings, and his wife noted persistent snoring, although improved. As a result, the CPAP pressure was increased to 10 cm H20 with some improvement. The patient has subsequently increased the pressure to 12 cm H20 on his own. Under these circumstances, his wife notes no snoring but occasionally notes a gurgling sound. She periodically has noted what appeared to be central apneas at a low frequency.

Review of the patients sleep habits reveals a bedtime of about 10:30 p.m., falling asleep quickly. He states that he awakens in about one hour from unknown cause and cannot return to sleep with the mask in place. As a result, he removes the mask, and sleeps for an additional 1-2 hours, then awakens and reapplies the mask. His final awakening is at about 08:30 in the morning, feeling more refreshed and without headaches in contrast to the previous experience without using CPAP. He also notes improved functioning during the day, but finds that the CPAP is causing repeated awakenings at night. He utilized Halcion on one night, noting improved quality of sleep.

The patient states that he has sought a couple of different fittings for the nasal mask. He utilized the nasal pillows, but found that this irritated a cartilaginous protuberance near his right nasal opening. He denies any nasal irritation with the use of the nasal mask.

His overall assessment is that his sleep quality and daytime functioning are improved with the use of CPAP, but he is distressed by the frequent awakenings. This may be the result of his gradually adjusting to the nightly use of the CPAP device. He appears to have achieved an optimal result with CPAP at a valve setting of 12 cm H2O, which he will continue. To aid the quality of his sleep while using CPAP, he will implement a trial of Restoril, 15 mgs at bedtime, assessing his response. He was urged to avoid the use of Restoril when not using the CPAP, as this may aggravate sleep apnea. He will report his progress to us in about one week.

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FOLLOW-UP SLEEP DISORDERS EVALUATION

PATIENT: SCHNEIDER, Dale

02-24-94

MR#:

72-60-04

DATE:

REF. PHYS:

B. Swartz, M.D.

Mr. Schneider returns for follow-up of his problem of obstructive sleep apnea for which he uses nasal CPAP on a nightly basis. He continues to have difficulty keeping the mask on all night. He falls asleep easily with the mask in place, but then awakens in about one hour, noting that the mask has been removed. He replaces it and returns to sleep, only to find that it has been removed repeatedly during the night, estimating it to be 5-6 times per night. Overall he feels that the quality of his sleep is better with the CPAP than without it, but wishes to improve it even further by avoiding his taking off the mask multiple times at night. He has used Restoril on occasion, perhaps twice per week, and notes that his sleep quality is better in that he has fewer awakenings. His sleep also is improved when his wife awakens and finds his mask off and gets him to put it back in place. He also notes fewer problems with migraine headaches when using the CPAP successfully.

The patient is unaware of why he removes the nasal CPAP at night. He is very interested in "making it work". As a result, he is referred to his homecare company to seek another mask and/or head gear that may be more comfortable. If this fails, he may be a candidate for an oral corrective device as an alternative to masal CPAP. He will report his progress to us in a few weeks.

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PAS/sg T: 03-13-94