



THE SLEEP DISORDERS CENTER

Scheduling:
Tel: 1-800- WE SLEEP (1-800-937-5337)
Fax: 866-214-8799

Laboratory:
Tel: 410-740-7623
Fax: 410-740-7628

PATIENT NAME: MITCHELL, Jason

MR#: M00381428

DATE OF STUDY: 08/14/2012

DATE OF BIRTH: 09/07/1970

REQUESTING PHYSICIAN: Dr. Robert Hedaya

BIPAP TITRATION STUDY

INDICATION FOR STUDY

The patient is a 41-year old male with a history of obstructive sleep apnea on BiPAP machine at home. He is undergoing a repeat BiPAP titration study to find the optimal BiPAP pressure.

Polysomnographic Study Technique

An attended polysomnographic study was obtained using the Alice Healthdyne polysomnographic system. A total of 17 channels were monitored including 4 channels of EEG, 2 channels of extraocular leads, chin EMG, leg EMG (2), electrocardiogram, combined nasal / oral air flow, chest wall effort, abdominal effort, oximetry and tracheal microphone, body position, heart rate.

Sleep Architecture

Total record time was 369 minutes. Total sleep time was 177.5 minutes. Sleep latency was 3 minutes. Sleep efficiency was reduced to 48%.

The different stages of sleep showed a Stage 1 at 2.3% of total sleep time. Stage 2 sleep was prolonged at 94.6% of total sleep time. The slow wave sleep was not recorded during the sleep study and REM sleep was reduced to 3.1% of total sleep time. REM latency was prolonged to 176 minutes.

The sleep continuity was disrupted with an arousal index of 7.4 per hour.

Oxygen Saturation

The mean oxygen saturation while awake was 96%. Oxygen saturation dropped to a nadir of 90% during sleep.

Cardiac Parameters

The average heart rate during the sleep was 75 beats per minute. No life-threatening arrhythmias were noted during the sleep study.

Periodic limb movements

The patient had a total of 6 limb movements for a Limb Movement Index of 2. There were no periodic leg movements noted during the sleep study. No nocturnal seizures or sleep-related abnormal behaviors were noted during the sleep study.

BIPAP TITRATION

The patient's BiPAP was titrated from a low IPAP pressure of 9 cm and EPAP pressure of 5 cm to a maximum IPAP pressure of 14 cm water and EPAP pressure of 10 cm water. At IPAP pressure of 14 cm water and EPAP pressure of 10 cm water, the patient slept for 33 minutes and AHI was reduced to 0 events per hour. Minimum oxygen saturation noted at this pressure was 93% and his arousal index was 7.2. It is to be noted that the patient's sleep efficiency was low and on the highest pressure used, the patient slept for only 33 minutes and was unable to fall back to sleep.

INTERPRETATION

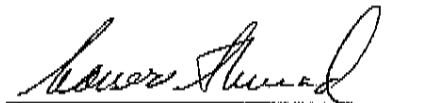
Obstructive sleep apnea syndrome. (327.23)

RECOMMENDATIONS

Based on this BiPAP titration study, the patient's BiPAP can be adjusted to IPAP of 14 cm and EPAP of 10 cm. The patient should be followed with a compliance card to make sure that his pressure is optimal and his AHI is reduced to within normal limits. If his AHI is abnormal on this compliance card, then his BiPAP pressure may need to be re-adjusted. To replicate the equipment dependent conditions under which the study was done, the patient should be provided with a ComfortGel medium-sized mask. A humidification system is also suggested to decrease dryness of the nasal passages and to enhance compliance. Continued followup will also enhance compliance. Clinical correlation is recommended.

The patient should be advised about proper weight management and weight loss, if clinically indicated, as excessive weight may worsen sleep-related disordered breathing and snoring. The patient also should be advised to avoid alcohol and sedatives, since CNS depressants may worsen sleep-related disordered breathing and snoring. The patient should be warned about driving precautions as hypersomnolence may contribute to accidents while driving or operating heavy equipment. In addition, a sleep hygiene evaluation to assess factors which may lead to poor sleep quality including avoidance of caffeine, nicotine and alcohol is advised. The patient may also need thyroid function tests, if clinically indicated, as hypothyroidism may worsen snoring and sleep apnea.

Consider evaluation by a sleep specialist.



Kaiser A. Ahmad, M.D.

Diplomate, American Board of Sleep Medicine

KAA:cbs/sy