

**03/30/2017 - CPAP in DMH EEG and Sleep Lab**

**Clinical Notes**

**Procedures**

**J Arnold, MD at 3/30/2017 2359**

Author: J Arnold, MD

Filed: 4/24/2017 9:42 PM

Editor: J Arnold, MD (Physician)

Service: General ICU

Date of Service: 3/30/2017 11:59 PM

Author Type: Physician

Status: Signed

DECATUR MEMORIAL HOSPITAL

PATIENT NAME: BOOK, FREDERICK P

DOB: 06/11/1974/DATE OF ADMISSION: 03/30/2017/ DATE OF DISCHARGE: 03/30/2017

DOCUMENT TYPE: SLEEP CENTER / PATIENT ACCT: 108541097

**CPAP TITRATION**

**SLEEP STUDY NUMBER**

17-359

**DIAGNOSTIC CODES**

OSA: G 47.33

This patient had a diagnostic sleep study on March 23, 2017. 7% of the sleep time was REM. The apnea-hypopnea index was 8.9. During REM sleep, the apnea-hypopnea index was 13.1. The lowest saturation was 86%. There was 52 minutes where the saturation was 88 or less.

He returns for CPAP titration. The standard recording montage was used. The standard scoring criteria used. Raw data is reviewed by myself and found to be technically acceptable.

CPAP was titrated between 5, 7, 9 and 11 cm of water pressure. The patient wears a small Simplus full face mask. Subjectively at the end of the study he was better rested.

CPAP titration as a whole: Sleep efficiency was 97%. 28% of the recording time was REM sleep. The arousal index was 11.9. The periodic leg movement index was 3.2. There was 5 minutes where the saturation was less than or equal to 88. The lowest saturation was 86.

CPAP of 5: Total recording time was 88.5 minutes. Total sleep time 83 minutes. All sleep was supine. All sleep was stage I and 2. The apnea-hypopnea index was 23.1. The arousal index was 28.6. The lowest saturation was 86.

CPAP of 7: Total recording time was 168.5 minutes. Total sleep time was 166 minutes. There was 22.5 minutes of REM sleep. 2.5 minutes of REM sleep were in the supine position. 20 minutes of REM sleep was in the side position. The respiratory disturbance index was 7.2. There were no events in the side position. In the supine position, the respiratory disturbance index was 12.7. The arousal index was 14.1.

CPAP of 9: Total recording time was 173 minutes. Total sleep time was 167 minutes. This was all supine sleep. There was 85.3 minutes of REM sleep. The respiratory disturbance index was 0.4. There were no events during non-REM

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**Clinical Notes (continued)**

sleep. During REM sleep, the respiratory disturbance index was 0.7. The arousal index was 5.4. The lowest saturation was 93.

CPAP of 11: The total recording time was 117 minutes. Total sleep time 113 minutes. This included 38.5 minutes of REM sleep. 13 minutes of REM sleep was in the supine position while 25.5 minutes of REM sleep was in the side position. The respiratory disturbance index was 1.6. There were no events in supine sleep. During side sleep, the respiratory disturbance index was 1.8. There were no events during REM sleep. The arousal index was 6.9.

**IMPRESSION**

CPAP corrects this patient's previously documented mild sleep apnea and hypoxia. There was REM rebound indicating improved sleep physiology.

**RECOMMENDATIONS**

The recommended CPAP pressure is 9 cm of water.

J. STEVEN ARNOLD, M.D./Job # 2802606 / 41961954 / 04/08/2017 17:19:00 / db / 04/09/2017 05:54:24

Cc:

Electronically signed by J Arnold, MD at 4/24/2017 9:42 PM

**Interdisciplinary Notes**

**Interdisciplinary by Meghann, RPSGT at 3/30/2017 2359**

Author: Meghann, RPSGT	Service: —	Author Type: RPSGT
Filed: 3/31/2017 1:52 AM	Date of Service: 3/30/2017 11:59 PM	Status: Signed
Editor: Meghann, RPSGT (RPSGT)		

Polysomnogram completed without incident. Patient wore a Small Simplus for his CPAP titration.

**By:** MEGHANN E CHEEVER, RPSGT; 3/31/2017, 1:52 AM

Electronically signed by Meghann, RPSGT at 3/31/2017 1:52 AM

**Interdisciplinary by Cynthia, RPSGT at 3/30/2017 2359**

Author: Cynthia, RPSGT	Service: —	Author Type: RPSGT
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Editor: Cynthia, RPSGT (RPSGT)		

**03/30/2017 - CPAP in DMH EEG and Sleep Lab (continued)**

**Interdisciplinary Notes (continued)**

**Sleep Study Preliminary Report**

Frederick P Book completed a CPAP titration this morning.

Please review the official report which will be available in the hospital's EMR system, in most cases, within 5 business days upon patient's discharge.

If your patient has not been started on home PAP therapy, your office will need to order through a DME provider.

Please feel free to contact the DMH Sleep Center at 217-876-3602 if you have further questions.

**By:** CYNTHIA J OWENS, RPSGT; 3/31/2017, 8:43 AM  
*Registered Polysomnographic Technician*

Electronically signed by Cynthia, RPSGT at 3/31/2017 8:45 AM

**03/23/2017 - PSG in DMH EEG and Sleep Lab**

**Clinical Notes**

**Procedures**

**J Arnold, MD at 3/23/2017 2359**

Author: J Arnold, MD

Filed: 3/28/2017 4:21 PM

Editor: J Arnold, MD (Physician)

Service: General ICU

Date of Service: 3/23/2017 11:59 PM

Author Type: Physician

Status: Signed

DECATUR MEMORIAL HOSPITAL

PATIENT NAME: BOOK, FREDERICK P

DOB: 06/11/1974/DATE OF ADMISSION: 03/23/2017/ DATE OF DISCHARGE: 03/23/2017

DOCUMENT TYPE: SLEEP CENTER / PATIENT ACCT: 107701968

SLEEP STUDY NUMBER

17- 326.

DIAGNOSTIC CODES

Obstructive sleep apnea: G47.33.

Hypoxia: R09.02.

Snoring: R06.83.

DEMOGRAPHICS

Sex: Male. Age: 42 years. Height: 70 inches. Weight: 209 pounds. BMI:30. Neck circumference: 39 cm.

The patient snores and tired during the daytime with an Epworth sleepiness score of 15.5 indicating excessive daytime sleepiness. He naps during the afternoon and evening.

He underwent sleep polysomnography. The standard recording montage was used. The standard scoring criteria used. Raw data is reviewed by myself and found to be technically acceptable.

FINDINGS

The total recording time was 436.5 minutes. Total sleep time 385.5 minutes. Sleep efficiency reduced at 88%. Latency to sleep onset is short at 1.5 minutes. There was 35 awakenings. There was 275.5 minutes of supine sleep and 110 minutes of side sleep.

Sleep staging shows 3% stage I sleep, which is reduced. Stage II sleep is elevated at 89.5%. Slow-wave sleep is absent. REM sleep was reduced at 7% versus the expected 20-25%. The arousal index is mildly elevated at 17.4. The periodic leg movement index was 5.0. The periodic leg movement arousal index was 3.6. Snoring is seen, but does not cause arousal. Respiratory event arousal index was 5.6.

There are 2 apneas, 55 hypopneas and 7 respiratory effort-related arousals. The apnea-hypopnea index as defined by Medicare is 8.9. The respiratory disturbance index, which also includes respiratory effort-related arousals is 10.0. In the supine position, the respiratory disturbance index is 12.0. In the side position, the respiratory disturbance index was 4.9. All REM sleep occurs in the side position. The respiratory disturbance index during REM sleep is 13.1. There are 51.9 minutes, or 13.3% of the recording with

**03/23/2017 - PSG in DMH EEG and Sleep Lab (continued)**

**Clinical Notes (continued)**

saturations less than or equal to 88. The lowest saturation is 86%. 28.1% of the recording time the saturations were between 80-89.

**IMPRESSION**

Sleep apnea is overall mild. There is significant prolonged hypoxia. Snoring also occurs because of hypoxia. CPAP titration should be considered.

There may be other causes of daytime fatigue. A approach would be to treat sleep apnea and then reevaluate daytime fatigue.

J. STEVEN ARNOLD, M.D./Job # 2791516 / 41907708 / 03/28/2017 12:50:17 / rb / 03/28/2017 13:18:59

Cc: Michael M. Wall, M.D.

Electronically signed by J Arnold, MD at 3/28/2017 4:21 PM

**Interdisciplinary Notes**

**Interdisciplinary by Meghann, RPSGT at 3/23/2017 2359**

Author: Meghann, RPSGT	Service: —	Author Type: RPSGT
Filed: 3/24/2017 12:49 AM	Date of Service: 3/23/2017 11:59 PM	Status: Signed
Editor: Meghann, RPSGT (RPSGT)		

Polysomnogram completed without incident.

**By:** MEGHANN E CHEEVER, RPSGT; 3/24/2017, 12:49 AM

Electronically signed by Meghann, RPSGT at 3/24/2017 12:49 AM

**Interdisciplinary by Cynthia, RPSGT at 3/23/2017 2359**

Author: Cynthia, RPSGT	Service: —	Author Type: RPSGT
Filed: 3/24/2017 2:26 PM	Date of Service: 3/23/2017 11:59 PM	Status: Signed
Editor: Cynthia, RPSGT (RPSGT)		

**Sleep Study Preliminary Report**

Frederick P Book was seen in the Dr. Clarence G. Glenn Sleep Center at Decatur Memorial Hospital for a Nocturnal Polysomnogram.

The following has been determined:

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**Interdisciplinary Notes (continued)**

Total Recording Time	in minutes	436.5
Total Sleep Time	in minutes	385.5
Total number of Respiratory Events		57
Apnea Hypopnea Index:	(> 5 is abnormal)	8.9

The sleep study has been scored by the sleep technologist but a final determination must be made by the interpreting physician to determine if more testing is needed. Please review the final report in order to review the physician's recommendation.

The Clarence G Glenn Sleep Center will call your patient to schedule a followup CPAP titration if the Obstructive AHI is  $\geq 15$  per center protocol. If the above events are central in nature, the center protocol will not apply and the ordering physician will need to order and manage any follow up testing.

NOTE: In most cases, a formal dictation by the interpreting physician will be available in the hospital's EMR system within 5 business days upon patient's discharge. Please feel free to contact the DMH Sleep Center at 217-876-3602 if you have further questions.

**By:** CYNTHIA J OWENS, RPSGT; 3/24/2017, 2:25 PM  
Registered Polysomnographic Technician

Electronically signed by Cynthia, RPSGT at 3/24/2017 2:26 PM