

# 수면다원검사와 내과적치료

홍 일 희

## Polysomnography and Medical Management of SDB

Il-Hee Hong, MD, PhD

Hansarang ENT Clinic, Goyang, Seoul Sleep Center, Seoul, Korea

### 수면다원검사

서론

(Polysomnography : PSG)

1)

2)

본론

1)

가

가

2

: , 411 - 370  
71 - 2  
: (031) 915 - 0980 · : (031) 915 - 0964  
E - mail : ihh@medimail.co.kr

(Thermi-ster, nasal pressure catheter),  
가

8, 4 calibration

4) 가가

- (Spontaneous arousal) : 가
- (Respiratory arousal) :
- 가 (Respiratory Effort Related Arousal : RERA) : flow limitation artifact
- (Leg movement arousal); 가

10  
90%

(Wake after Sleep Onset : WASO),

2가 가

(1, 2

), (3, 4 ) 가

- Chicago criteria(AASM Task Force, 1999)
  - 10 50%
  - 50%
  - 3%
- Medicare Criteria 10
  - 가 30% 가 4%

(Arousal) 가

, 16 Hz (spindle )

1) 10

2) 10

3) 3 90~100% ,

가

- Nadir SaO<sub>2</sub> 85% 가
- 4 가 1) (SDB) 4) 가
- 2) 90% 3) 90% 4) 가
- 2~4% 60 (Moderate) : 가
- OSA 91~81% (Severe) : 가
- 67% , 67% , 81~ 가 3)
- (Body position) : OSA
- (supine position) OSA 5)
- OSA가
- REM OSA(ROSA) : OSA
- OSA가 AH이 10~25 , AH이 AH이 2 가 , AH이 10 가 가
- 가
- Supine OSA(SOSA) : OSA가 가
- OSA independent of sleep stage or sleep position(IOSA) : OSA가 가
- 가

RDI가 RDI RDI

OSA

(Rebound sleep),

RDI가 REM OSA, Sleep position(OSA Decubitus), First Night Effect, REM

RDI 가 , Rebound sleep, RDI

가 가 Caffeine, nicotine, Theophylline, Amphetamines CPAP

Benzodiazepines, CNS depressants MAO inhibitors, TCAs, Amphetamines, Barbiturates, Alcohol, Anticholinergics 가

가 가

OSAS ?

OSA 가 서 론

OSA

RERA 가

가

본 론

가

(Behavioral therapy)  
OSA 가 , , 가 .

(Functional residual capacity)  
CPAP 가 .

CPAP AHI가 15  
AHI가 5~15 , ,

(semiupright position)  
(snore Ball)  
<sup>6)7)</sup> OSA

가 . 가 .

가 가 , 가

<sup>10-12)</sup> 가

<sup>8)</sup> 가

가 . 가

가 . 가 . 가 .

가 . leak 가 ( ) ,

가 . 가 .

<sup>9)</sup> 가 .

(CPAP), Auto-titrating PAP(Auto-PAP), Bi-level PAP(Bi-PAP)

1981 Sullivan

<sup>9)</sup> Auto-titrating

가 auto - PAP 3

가 devices algorithms , CPAP /

13-15) devices 가

Auto - PAP RDI , , 가 ,

CPAP , ,

auto - PAP ,

level 15) 18)19)

OSAS Auto - , , , ,

PAP 가 , 가

Bi - level positive pressure therapy(Bi - PAP) 가

CPAP 가

12 cm of H2O

Bi - PAP ( , ) Bi-

PAP , COPD

AHI

16)17)

leak 가

full - face masks 가

가 Bi - level PAP CPAP

2

Auto - titrating CPAP system

CPAP - , 가 가

65~85%

20) 4~6

중심 단어 : CPAP

**REFERENCES**

- 1) Guidelines for Polygraphic Assessment of Sleep-Related Disorders. *Journal of Clinical Neurophysiology* 1994;11 (1):116-24.
- 2) American Academy of Sleep medicine Task Force. *Sleep-related breathing disorders in adults: recommendations*

AHI, ESS(Epworth Sleepiness Scale), RDI 가 (4 ~2 )

- for syndrome definition and measurement techniques in clinical research. *Sleep* 1999;22:667-89.
- 3) Modified from Gibson GE, Pulsimelli W. *Brain dysfunction in mild to moderate hypoxia. Am J Med*, 1891;70:1247-54.
  - 4) *The international Classification of sleep disorders AASM: 2001.*
  - 5) O'Connor C, Thornley KS, Hanly P. *Gender differences in the polysomnographic features of obstructive sleep apnea. Am J Respir Crit Care Med* 2000;161:1465-72.
  - 6) McEvoy RD, Sharp DJ, Thornton AT. *The effects of posture on obstructive sleep apnea. Am Rev Respir Dis* 1986;133:662-6.
  - 7) Phillips BA, Okeson J, Paesani D, Gilmore R. *Effect of sleep positional on sleep apnea and parafunctional activity. Chest* 1986;90:424-9.
  - 8) Robinson RW, White DP, Zwillich CW. *Moderate alcohol ingestion increase upper resistance in normal subjects. Am Rev Respir Dis* 1985;132:1238-41.
  - 9) Sullivan CE, Issa FG, Berthon-Jones M, Eves L. *Reversal of obstructive sleep apnea by continuous positive airway pressure applied through the nares. Lancet* 1981;1:862.
  - 10) Chesire K, Engelman, Deary I, Douglas NJ. *Factors impairing daytime performance in patients with sleep apnea/hypopnea syndrome. Arch Intern Med* 1992;152:538.
  - 11) Engelman H. *Self-reported use of CPAP and benefits of CPAP therapy. A patient survey. Chest* 1996;109:1470.
  - 12) Krieger J, Kurtz D, Petiau C, Sforza E, Trautmann D. *Long-term compliance with CPAP therapy in obstructive sleep apnea patients and in snorers. Sleep* 1996;19:S136.
  - 13) Lofaso F, Lorino AM, Duizabo D, Najafi Zadeh H, Theret D, Goldenberg F, et al. *Evaluation of an autoCPAP device based on snoring detection. Eur Respir J* 1996;9:1795.
  - 14) Berthon-Jones M. *Feasibility of a self-setting CPAP machine. Sleep* 1993;16:S120.
  - 15) Scharf MB, Brannen DE, McDannold MD, Berkovitz DV. *Computerized adjustable versus fixed CPAP treatment of obstructive sleep apnea. Sleep* 1996;19:491.
  - 16) Possie GL, Berry RB. *Oral-nasal CPAP as a treatment for obstructive sleep apnea. Chest* 1994;106:180.
  - 17) Sanders MH, Kern NB, Stiller RA, Strollo PJ Jr, Mortin TJ, Atwood CW Jr. *CPAP therapy via oronasal mask for obstructive sleep apnea. Chest* 1994;106:774-9.
  - 18) Hoffstein V, Viner S, Mateika S, Conway J. *Treatment of obstructive sleep apnea with nasal continuous positive airway pressure. Patient compliance. Perception of benefits and side effects. Am Rev Respir Dis* 1992;145:841.
  - 19) Pepin JL, Leger P, Veale D, Langevin B, Robert D, Levy P. *Side effects of nasal continuous positive airway pressure. Study of 193 patients in two French sleep centers. Chest* 1995;107:375.
  - 20) Nino-Marcia G, McCann CC, Bliwise DL, Guilleminault C, Dement WC. *Compliance and side effects in sleep apnea patients treated with continuous positive airway pressure. West J med* 1989;150:165.