

OSA Panel Discussion

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Dual appointment in Sleep Medicine

HISTORY:

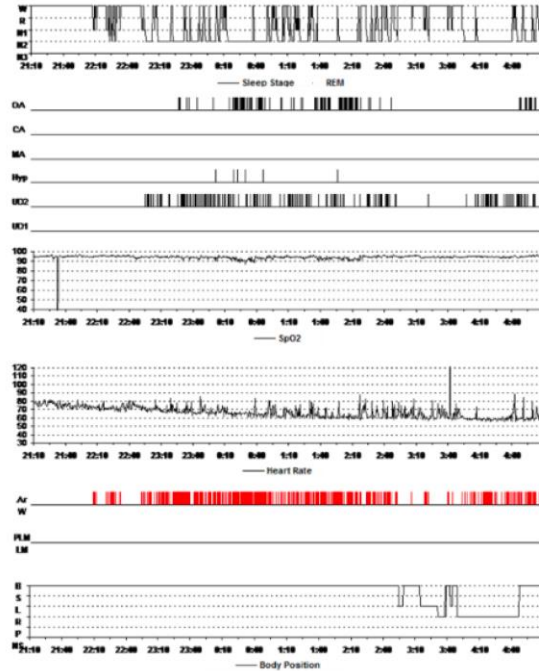
- 37y M w/ no significant PMH and a 10-year history of progressive snoring
- Initial HST 5 years ago demonstrated severe OSA (AHI 31)
- Started on CPAP but significant difficulty tolerating full face mask
- Nasal obstruction: trialed Flonase in the past
- No comorbid sleep conditions
- Has not trialed OAT or any other treatments for OSA
- Persistent daytime sleepiness and snoring

PHYSICAL EXAM:

- BMI 23
- Moderately deviated septum w/ turbinate hypertrophy
- 1+ tonsils
- Friedman tongue position 2
- Class 1 occlusion
- Retrognathia



POLYSOMNOGRAM



Date	4/21/2023
BMI	24
Sleep Test	PSG Dx
Hypopnea Definition	3%
TST (min)	277
Supine (%)	87
REM (%TST)	0
AHI	64
oAHI	64
oAI	NR
Supine AHI	71
Non-Sup AHI	35
REM AHI	N/A
NREM AHI	64
LSat (%)	87
ODI4	NR
%TST < 90%	NR

Drug-induced Sleep Endoscopy w/ Positive Airway Pressure



Baseline



DISE-PAP – PhOP 13cm

- What treatment options would you offer this patient?

- OAT
- Nasal surgery w/ retriial of PAP w/ nasal mask
- Pharyngoplasty, 2nd stage HGNS if needed
- Maxillomandibular advancement surgery

- s/p MMA on 5/1/2023:
 - **10mm** advancement of the maxilla
 - **15mm** advancement at the pogonion
 - **11 degree** counterclockwise rotation of the maxillomandibular complex



- Post-op HST

Date	4/21/2023	8/9/2023
BMI	24	23
Sleep Test	Preop PSG Dx	Post-op HST
Hypopnea Definition	3%	3%
TST (min)	277	436
Supine (%)	87	50
REM (%TST)	0	27
AHI	64	7
oAHI	64	5
oAI	NR	NR
Supine AHI	71	9
Non-Sup AHI	35	4
REM AHI	N/A	7
NREM AHI	64	7
LSat (%)	87	92
ODI4	NR	7
%TST < 90%	NR	0

- Consider ways to optimize CPAP – I.e. nasal surgery
- Include evaluation of facial profile and intraoral skeletal exam to quickly evaluate for skeletal deficiencies
- Particularly in younger patients with retrognathia and severe OSA, include skeletal surgery as a treatment option
- Our Patient: young age, high PhOP, significant retrognathia, 1+ tonsils, severe OSA

- 18y F w/ PMH HTN who presented with snoring and excessive daytime sleepiness
 - Falls asleep multiple times per day, always tired
 - PSG: AHI 25, ESS 24
- Using CPAP nightly but still feeling exhausted and falling asleep throughout the day
- Interested in exploring CPAP alternatives as she feels its not working

- PAP compliance:
 - Using 85% of nights >4 hours, rAHI 2
- Physical Exam:
 - BMI 31
 - Septal deviation, turbinate hypertrophy
 - 2+ tonsils
 - Mild retrognathia

Thoughts?

- Underwent PSG w/ CPAP and MSLT
 - Sleep latency 6 minutes
 - 2 sleep onset REM periods
- Referred to sleep medicine for management of narcolepsy with resolution of residual daytime sleepiness on pharmacotherapy...still doesn't like CPAP

- Beware of severely elevated ESS
 - OSA rarely causes ESS > 18
- If persistent symptoms despite effective CPAP use, consider referral for evaluation of comorbid sleep or medical conditions
- Multidisciplinary treatment plans

- 62y F w/ PMH HTN and severe OSA w/ AHI 45
- s/p right HGNS implantation
- Returns to clinic after 3 months of use for re-evaluation

Case 3 - Inspire

UTILIZATION SUMMARY (30 Oct 2020 12:00 to 30 Apr 2021 12:00 - 182 nights)

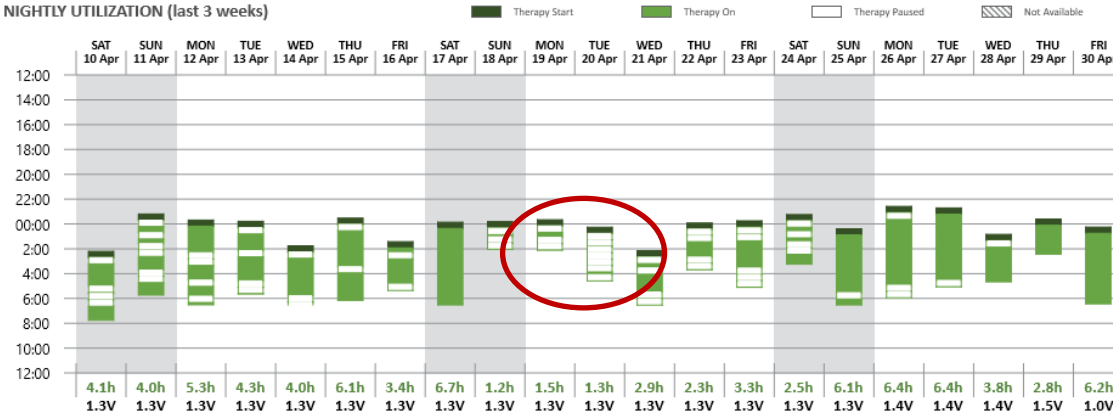
NIGHTS USED
182 of 182 (100%)

HOURS PER NIGHT USED
3.2 hours

THERAPY PAUSES
4.3 per night

NIGHTS USED >= 4 HOURS
61 of 182 (34%)

NIGHTLY UTILIZATION (last 3 weeks)



PATIENT AMPLITUDE UTILIZATION (30 Oct 2020 12:00 to 30 Apr 2021 12:00 - 182 nights)

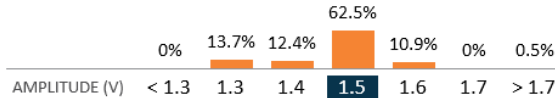
AMPLITUDE ON 19 Feb 2020 (V)
1.4

PATIENT AMPLITUDE CHANGES
18 (0.7 per week)

PERCENT USED

INCOMING AMPLITUDE (V)
1.5

INCOMING PATIENT CONTROL (V)
1.1 - 2.0



Case 3 – The Over-titrator

UTILIZATION SUMMARY (30 Apr 2021 12:00 to 19 May 2021 12:00 - 19 nights)

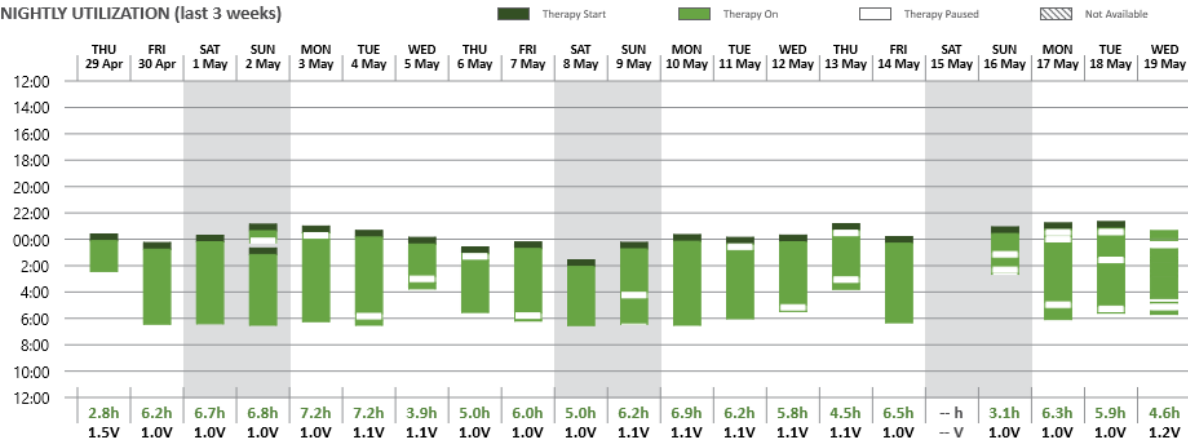
NIGHTS USED
18 of 19 (95%)

HOURS PER NIGHT USED
5.8 hours

THERAPY PAUSES
1.2 per night

NIGHTS USED >= 4 HOURS
16 of 19 (84%)

NIGHTLY UTILIZATION (last 3 weeks)



PATIENT AMPLITUDE UTILIZATION (30 Apr 2021 12:00 to 19 May 2021 12:00 - 19 nights)

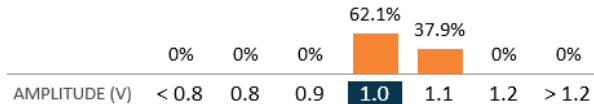
AMPLITUDE ON 30 Apr 2021 (V)
1.5

PATIENT AMPLITUDE CHANGES
4 (1.5 per week)

PERCENT USED

INCOMING AMPLITUDE (V)
1.0

INCOMING PATIENT CONTROL (V)
0.8 - 1.9



Case 3 – Inspire

UTILIZATION SUMMARY (07 May 2021 12:00 to 18 Jun 2021 12:00 - 42 nights)

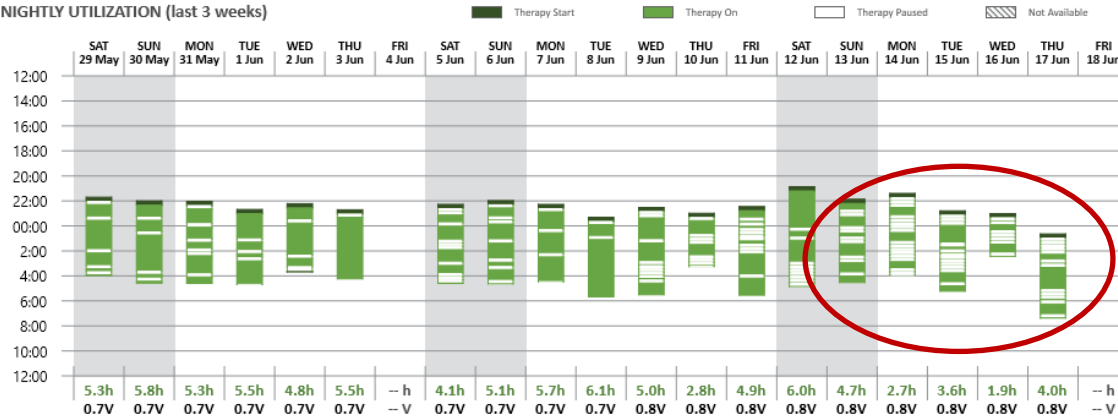
NIGHTS USED
41 of 42 (98%)

HOURS PER NIGHT USED
5.1 hours

THERAPY PAUSES
4.9 per night

NIGHTS USED >= 4 HOURS
33 of 42 (79%)

NIGHTLY UTILIZATION (last 3 weeks)



PATIENT AMPLITUDE UTILIZATION (07 May 2021 12:00 to 18 Jun 2021 12:00 - 42 nights)

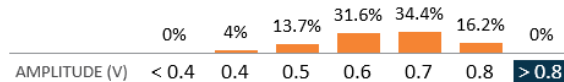
AMPLITUDE ON 07 May 2021 (V)
2.0

PATIENT AMPLITUDE CHANGES
19 (3.2 per week)

PERCENT USED

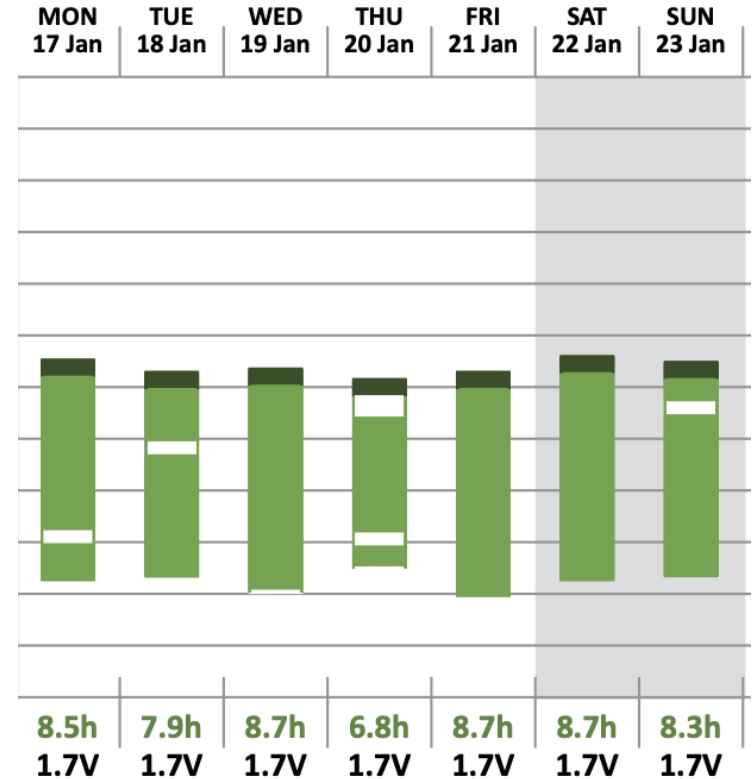
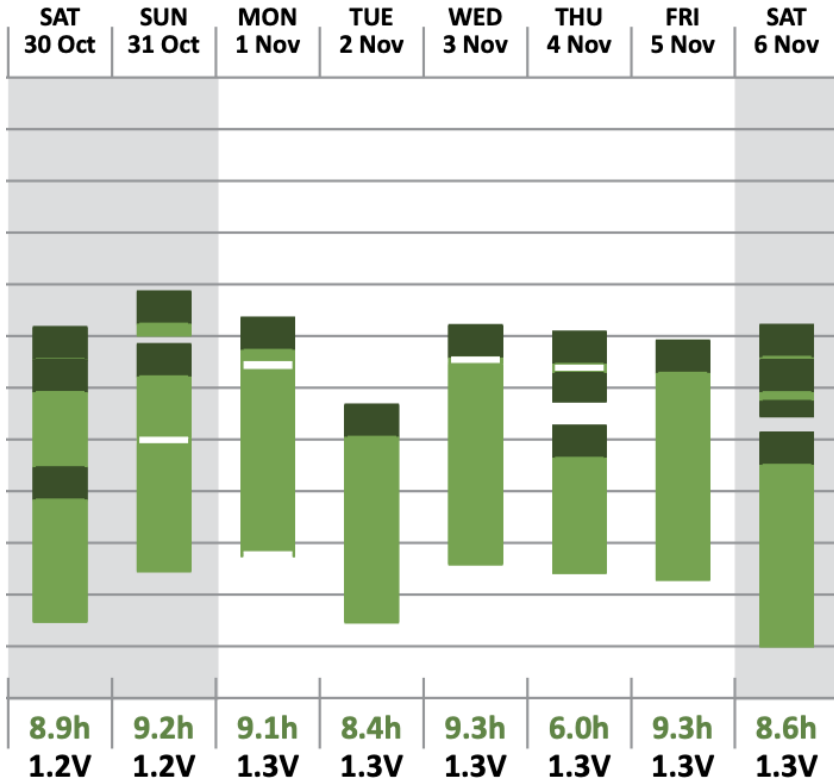
INCOMING AMPLITUDE (V)
0.9

INCOMING PATIENT CONTROL (V)
0.4 - 1.3



- Assess if the issue is stimulation discomfort, primary insomnia, both?
 - Is the stimulation uncomfortable?
 - Is the pause time long enough?
 - What wakes up up?

COMISA and CBT-I



- You can glean a lot of information from the Inspire cloud data
- Watch out for over-titration, stimulation discomfort, frequent pausing, comorbid primary insomnia