

Dr. [REDACTED]
Board Certified, Internal Medicine

01/26/2021

[REDACTED]
[REDACTED]

Clinical Background Dr. [REDACTED]:

After graduating from UCSF Medical School with Honors in 1984, I completed my residency in Internal Medicine at Beth Israel Hospital in Boston, MA, a major Harvard University affiliate. I am a Board-Certified Internist and Geriatrician with extensive experience in rehabilitation and the full spectrum of internal medicine subspecialties. After working 22 years as a hospitalist in a rehabilitation facility owned by the City and County of San Francisco and serving largely indigent patients with advanced medical problems, I worked for 10 years at a Program of All Inclusive Care for the Elderly (PACE) in San Francisco and have been a Medical Expert for Social Security Disability since 2013. Though I am currently licensed to practice medicine in the State of California (#G6715), I am professionally and ethically able and qualified to examine records and offer a medical opinion for an individual regardless of state residence. Medical training and testing are governed by federal standards. This is because medical opinions are not decided by the state in which one practices, but by one's training and experience. State licensure does not decide medical standards, they are evidence-based, and guidelines for medical training are set nationally. All U.S. physicians must pass the United States Medical Licensure Examinations.

Medical Records Reviewed:

I reviewed Mr. [REDACTED] entire C file provided, including military, VA, and private medical records; C&P Exams/DBQs and Ratings Decisions; and personal statement.

Overview of Case:

Mr. [REDACTED] is a 44-year-old right-handed man. He served honorably in the Marine Corps from 04/29/1997-04/28/2001 and 12/01/2005-11/30/2006. He served in the Gulf War and was deployed to Iraq and Afghanistan several times.

He is service connected for cold injury residuals of the left foot with a rating of 30%, cold injury residuals of the right foot with a rating of 30%, tinnitus with a rating of 10%, Post-Traumatic Stress Disorder (PTSD) with alcohol use disorder with a rating of 50%, and right ankle fracture residuals with a rating of 10%.

Mr. [REDACTED]'s medical records reveal the following problem:

complaints. Delays in diagnosis of Sleep Apnea can be quite lengthy up to 480 months (40 years).

Delayed Diagnosis of Obstructive Sleep Apnea: Don't Ask, Don't Tell.

<https://www.> [REDACTED]

“The average time elapsed between first recognition by the patient of a major feature of OSAS to sleep center referral was 87.5 months (range, 1 to 480 months). Only 4% of referrals were made as a result of the clinician eliciting a history of sleep-related complaints. Once OSAS-related features were apparent to the clinician, the average time to referral for diagnostic testing was 7.9 months (range, 0 to 128 months). These data suggest that both a lack of reporting of symptoms by OSAS patients and a lack of obtaining appropriate sleep history by health care providers contribute to a significant delay in diagnosis of OSA.”

Furthermore, the relationship between OSA and active duty military personnel is well described in the medical literature.

Sleep disorders and associated medical comorbidities in active duty military personnel

<https://pubmed.ncbi> [REDACTED]

*“Primary sleep diagnoses (n = 725) included: mild obstructive sleep apnea (OSA), 207 (27.2%); insomnia, 188 (24.7%); moderate-to-severe OSA, 183 (24.0 %); and paradoxical insomnia, 39 (5.1%); behaviorally induced insufficient sleep syndrome, 68 (8.9%) and snoring, 40 (5.3%) comprised our control group. Short sleep duration (< 5 h) was reported by 41.8%. Service-related illnesses are prevalent in military personnel who undergo polysomnography with significant associations between PTSD, pain syndromes, and insomnia. Despite having sleep disorders, almost half reported short sleep duration. **Multidisciplinary assessment and treatment of military personnel with sleep disorders and service-related illnesses are required.**” emphasis added.*

OSA and PTSD Literature Review and Conclusions:

- I. The understanding of the pathophysiology of OSA *in Veterans with PTSD* is an evolving area of study. Factors that may connect the two disorders (PTSD and OSA) include disturbed sleep, sleep fragmentation and hyperarousal due to the physical and psychological stressors of military duty/combat, the chronic stress from PTSD, or the sleep disturbances caused by OSA and PTSD.

As noted in one VA study of OEF/OIF/OND Veterans, some of the pathophysiology of OSA clearly includes sleep disturbances and fragmentation.

[REDACTED] Advancing treatment of comorbid PTSD and OSA. [REDACTED]

explanation may be due to the shared risk factors of PTSD and OSA in a military population. Hoge and colleagues suggest disturbed sleep in combat, which can result from prolonged operations or lack of quality sleep, is a potential precursor not only to PTSD but also OSA. It is possible that prolonged sleep deprivation along with sleep fragmentation and hyperarousal due to the physical and psychological stressors of combat contribute to the etiology of OSA, and separately to PTSD severity. Another possibility is that the chronic stress from PTSD increases the likelihood of developing OSA, or that the sleep disturbances of OSA increase the likelihood of getting PTSD.”
Emphasis added

Multiple published studies reach similar conclusions in both Veteran and non-Veteran populations:

[REDACTED]. Prevalence of obstructive sleep apnea in patients with posttraumatic stress disorder and its impact on adherence to continuous positive airway pressure therapy: a meta-analysis. [REDACTED].

“In a meta-analysis on CPAP, pooled variance % of OSA was reported in 10 studies on individuals with PTSD (mean age 42.4 years). OSA prevalence was 75.7% when using criteria of AHI > 5 and 43.6% when using AHI > 10; rates are significantly higher in individuals with PTSD than without. Of note, a majority of their studies (N = 9) used veteran samples, limiting generalizability to civilian samples. “(emphasis added)

Association of Psychiatric Disorders and Sleep Apnea in a Large Cohort

[https://www.\[REDACTED\]](https://www.[REDACTED])

“Out of 4,060,504 unique cases, 118,105 were identified as having sleep apnea (estimated prevalence of 2.91%). Mean age at the time of diagnosis was 57.6 years. Psychiatric comorbid diagnoses in the sleep apnea group included depression (21.8%), anxiety (16.7%), posttraumatic stress disorder (11.9%), psychosis (5.1), and bipolar disorders (3.3%). Compared with patients not diagnosed with sleep apnea, a significantly greater prevalence (P < .0001) was found for mood disorders, anxiety, posttraumatic stress disorder, psychosis, and dementia in patients with sleep apnea.”
(emphasis added)

[REDACTED] et al. Sleep-disordered breathing in Vietnam veterans with posttraumatic stress disorder. Am [REDACTED]

“found that in a sample of 110 Vietnam veterans diagnosed with PTSD (mean age 59.9; mean BMI 31.1), 69% had moderate to severe OSA.⁵ Kinoshita and colleagues, using PSG at a VA hospital, found that 83% of Vietnam veterans had at least mild OSA (mean age 61.3; mean BMI 30.7).” (Emphasis added)

III. VA rules do not require that there be absolute proof of a “causal link” between PTSD and OSA. The VA standard is “at least as likely as not”. No such proof of

a causal link would be possible for any potential factor resulting in OSA. Those type of causation studies could not be ethically performed on human subjects. Therefore, we are necessarily dependent on interpretation of observational and case-controlled studies. Given the large and growing number of studies documenting statistically significant links between PTSD and OSA, any reasonable physician would conclude that PTSD is more likely than not a significant factor in the development and/or aggravation of OSA.

Extensive studies have concluded that there is a strong statistical association between PTSD and OSA, specifically in Veterans. The strong relationship between PTSD and OSA across multiple studies makes the likelihood of coincidence as an explanation for the relationship between PTSD and OSA virtually nil.

Prevalence of obstructive sleep apnea in patients with posttraumatic stress disorder and its impact on adherence to continuous positive airway pressure therapy: a meta-analysis
[https://www. \[REDACTED\]](https://www. [REDACTED])

*“The pooled prevalence rates of OSA based on different apnea-hypopnea index (AHI) criteria in PTSD patients was 75.7% (95% confidence interval [CI] = 44.1-92.5%) (AHI \geq 5) and 43.6% (95% CI = 20.6-69.7%) (AHI \geq 10), respectively. **Subgroup analysis showed that there was a significant difference between the prevalence of OSA in veterans with PTSD compared to nonveterans or mixed samples.**” (emphasis added)*

[REDACTED]. The comorbidity of sleep apnea and mood, anxiety, and substance use disorders among obese military veterans within the Veterans Health Administration. [REDACTED]

“Among obese veterans within VA, OSA is associated with increased risk for having a mood and anxiety disorder, but not substance use disorder, with the strongest associations observed for posttraumatic stress disorder (PTSD) and major depressive disorder (MDD). In addition, this relation remained after accounting for severity of BMI.”

- IV. Furthermore, experts recommend that Veterans with PTSD be routinely screened for OSA. This recommendation would not make sense if this association were solely due to coincidence.

[REDACTED]
[REDACTED]
[REDACTED] Published online 2015 May 15. doi:
[10.5664/jcsm.4692]

“Our findings suggest a need to make screening returning OEF/OIF/OND veterans with PTSD for OSA a more standard aspect of care, and a need to make diagnostic assessments for OSA (access to PSG) and OSA interventions readily available to all

veterans. Given the strong association between OSA and PTSD among OEF/OIF/OND veterans across studies, screening in both primary care and mental health settings may be warranted... ” emphasis added

- V. Treatment of OSA has been shown to improve PTSD symptoms in peer-reviewed studies.

Treatment of OSA with CPAP Is Associated with Improvement in PTSD Symptoms among Veterans [https://\[REDACTED\]](https://[REDACTED])

*“A prospective study of Veterans with confirmed PTSD and new diagnosis of OSA not yet using PAP therapy were recruited from a Veteran's Affairs sleep medicine clinic. **Treatment of OSA with PAP therapy is associated with improvement in PTSD symptoms, although the mechanism is unclear. Nonetheless, PAP should be considered an important component of PTSD treatment for those with concurrent OSA.**” (emphasis added)*

[REDACTED]

“Our study shows that veterans with OSA and overt PTSD respond readily to CPAP therapy with symptom improvement proportionate to the CPAP compliance level.”

[REDACTED]

63, [27707436](https://www.27707436).

“Treatment of OSA with PAP therapy is associated with improvement in PTSD symptoms”

- VI. PTSD related symptoms of sleep disturbance are not distinct from OSA. Sleep disturbances are part and parcel of both OSA and PTSD.

Obstructive Sleep Apnea and Posttraumatic Stress Disorder among OEF/OIF/OND Veterans [https://www.\[REDACTED\]](https://www.[REDACTED])

*“Among veterans with PTSD, sleep disturbances are nearly universal. Beyond the PTSD criterion symptoms of insomnia and nightmares, **40% to 98% of veterans with PTSD also have a co-occurring sleep disturbance such as obstructive sleep apnea (OSA), periodic leg movement disorder, sleep terrors, or nocturnal anxiety attacks.**” (emphasis added)*

[REDACTED]

[REDACTED]

published research studies and my medical opinion after reviewing all the evidence of record.

Sincerely,

A handwritten signature in black ink, consisting of a large initial 'S' followed by several loops and a long horizontal tail stroke. The signature is positioned above a solid black rectangular redaction box.