The Prevalence of Sleep Apnea in Patients with Chronic Pain: A Retrospective Chart Review

Patel, M.P., Ashburn, M., Lacy, K., Popescu, A.

IRB Number 822951

Introduction: Sleep disordered breathing, including obstructive sleep apnea and central sleep apnea, appears to confer significantly increased risk for adverse events, including death in patients receiving chronic opioids. Patients presenting for evaluation and treatment for chronic pain often report sleep disturbances, and may have undiagnosed sleep disordered breathing. This study is intended to determine a prevalence of sleep disordered breathing in our practice and the role of the STOP-GAP screening tool.

Prior small, observational prospective/retrospective hybrid study indicated that 46% of opioid users has Severe sleep apnea as defined by AHI > 30 and 71% had moderate sleep apnea AHI > 15 however no study could be found using STOP-GAP Screening tool.[1]

Evaluation of the prevalence of SDB in patients taking chronic opioid therapy at Penn Pain Center is implicated to compare the population to current estimates in the literature and to serve as a pilot study for a larger prospective study defining the prevalence of OSA and CSA in patients on chronic opioid therapy.

Methods: Our team identified a time period from 06/2015 to 06/2017 whereby all New Patient Visits (NPV) were selected. Inclusion criteria included any patient over the age of 18. Patients below this age or who did not completed a NPV were excluded. Additionally, these patients were screened by ICD-9 and ICD-10 (Index 1) coding to see determine the approximate prevalence of SDB in our population. We then took these patients and performed a manual chart collection of demographic data including Age, Sex, BMI, Race, & MED average at time of initial encounter, PSG ordered and Performed as well as the results of these diagnostic tests.

Results: 2312 NPV in the Penn Pain Medicine Clinic during the above time was captured. STOP-GAP tool was used in < 1% of charts thus this was aborted to utilizing an ICD-9/10 screen for the purposes of this study. Of these, 368 had ICD-9/10 qualifications for SDB. Of the 368 Patients, 72 had PSG ordered however only 23 were performed. Of the 23, 14 had OSA diagnosed by PSG with the other 9 demonstrating “other sleep related breathing disorders.” P-values were statistically significant (p=.0001) for MED values in the “Study Ordered” vs. “No Study Ordered” Group. Average MED in the Study Ordered group was 121.85 (n=72) while the No study ordered group was 44.24 (n=296.) 368 out of 2312 patients leads to a SDB prevalence in the pain clinic of 15.917% which is well below the national average and in comparison to prior studies performed. (Index 2)

Conclusion: This research study indicates that there is a strong correlation with MED and PSG ordered by the Pain Physician. This correlation is further reinforced by the 100% positive testing for the 23 studies performed. This research study was limited by a lack of use of the STOP-GAP screening tool. Limitations also include ICD-9/10 related screening as well as poor patient compliance for PSG testing.

References:

1. Mador MJ, Henderson J. (2014). Effects of opioids on sleep and breathing in chronic pain patients. Journal of Clinical Sleep Medicine : JCSM : Official Publication of the American Academy of Sleep Medicine, 2014 Nov;15(11):1902-10. doi: 10.1111/pme.12472. Epub 2014 Jun 14.