Clinical association between obstructive sleep apnea and facial pigmentation, and the relation between obstructive sleep apnea and vasovagal symptoms with resulting smoking tendency and the effect of treatment on the disorders in patients referred for sleep study.

September 2024

Research Design and Methodology

In this prospective cohort study, participants referred for a sleep study by in-lab polysomnography at the Jordan University Hospital and those who preferred their study conducted at a private clinic or by at-home sleep study will be screened and physically examined for any facial discoloration which will be accordingly graded as low, moderate, or high based on severity of difference from normal skin color and texture and pictured with patients' consent and privacy maintained. In addition to a general history, participants will be asked in detail about their smoking habits, vasovagal symptoms, sleeping habits, and any specific obstructive sleep apnea symptoms. After the sleep study is performed, positive and negative results will be collected and correlated with presence of facial discolouration. Severity of OSA will be graded by apnea-hypopnea index (AHI) and recorded as mild (5 - 15 events/hour), moderate (15 - 30 events/hour), or severe (> 30 events/hour). Participants with positive results will then be followed up with at 3 weeks and 6 months to determine what treatment they were given, assessed for improvement on treatment, and be questioned regarding smoking and vasovagal symptoms again. Improvement is defined as better sleep quality and reduction of initial symptoms. Participants with negative results will also be followed up with and asked about their smoking habits and vasovagal symptoms. Correlation will then be made between the group that improved on treatment and the group that did not (whether due to ineffective treatment or not receiving treatment at all) to see if improvement reduces smoking tendency with alleviated vasovagal symptoms, and compared with participants with negative sleep study results for any change in smoking habits as well.

Population and Sample

A purposive sampling technique will be utilized to determine the study population. The target population is patients above the age of 18 referred for sleep study at the Jordan University Hospital and Jordan Hospital. Patients who agree to participate in this study and sign the consent form.

Data Collection

Researchers will interview patients in person at their initial sleep study visit to physically examine and observe participants' faces for discoloration and take pictures for future reference with consent. Follow up at 3 weeks and 6 months will be done either in the clinic or over the phone and Email.

Ethical Considerations

Informed consent will be obtained from participants with anonymity confidentiality assured. The study will be explained to patients, after which they must sign a consent form. Each will be assigned a number and the collected data will be used for analysis without reference to patients' identities. Participation does not add risk to the patients since their treatment plan will not be altered, only followed up with.