**Dr. Mohammad Alkhatib**

**The Association Between the Risk of Atrial Fibrillation and Obesity Induced Hypoventilation Syndrome Compared to Obstructive Sleep Apnea in Obese Patients.**

**Background:**

Obstructive sleep apnea (OSA) has been tightly linked to Atrial Fibrillation (AFIB) due to nocturnal hypoxia, but there yet to be studies demonstrating the risk of (AF) in Obesity Induced Hypoventilation Syndrome (OHS). Therefore, we investigated the risk of (AF) in (OHS) compared to (OSA).

**Hypothesis:**

We hypothesize that constant hypoxia in (OHS) group of patients increases the risk of (AF) compared to Nocturnal hypoxia in (OSA) after controlling obesity as a confounding factor.

**Methods:**

We included 443 consecutive patients diagnosed with obesity, (OHS) and (OSA) from January 2010 through December 2016. Obesity was identified as BMI>30. Odds ratio was calculated for (AFIB) in (OHS) and OSA groups.

**Results:**

We evaluated a cohort of 443 consecutive patients. In the OHS group, 39.7% were males compared to 41.8% in the OSA group with (*p*=0.543). The average age for OHS and OSA groups were 59.64 and 54.72 respectively (*p<0.001)*. The African American race constituted 61.6% of the OHS group and 41.4% of the OSA group (*p*=0.001). (OHS) group with history of Type 2 diabetes mellitus and congestive heart failure were 78.8%, 65.1% respectively compared to 47.5%, 24.6% respectively in the OSA group (*p*<0.001). Odds ratio of AFIB in OHS compared to OSA was calculated as 1.776 with 95% CI (1.032 – 3.055) *p*= 0.0379

**Conclusion:**

OHS was found to be an independent risk factor for AFIB after controlling obesity as a risk factor.

