Sleep Apnea Assignment (Online Content 1.5H)

Carolyn Lynch

1) Cohort studies have shown that obstructive sleep apnea is a risk factor for HTN, CAD, CVA, MI and Death.
2) Although obstructive sleep apnea probably increases the risk of cardiovascular disease through a number of mechanisms, repetitive cycles of hypovolemia and reoxygenation are thought to play a central role by augmenting sympathetic nervous system activity, systemic inflammation, and oxidative stress.
3) To assess the value these treatments may offer beyond that of conventional risk-factor management, the study targeted patients whose care was managed by a cardiologist, and education on habits promoting sleep hygiene (e.g., appropriate timing and duration of sleep) and a healthy lifestyle was provided to all participants.
4) The studies were scored by a single certified scorer in accordance with guidelines from the American Academy of Sleep Medicine, which specify a reduction in airflow accompanied by a reduction in oxygen saturation of 3% or more as indicative of hypopnea.
5) Venipuncture was performed in the morning after a 12-hour fast to measure serum levels of glucose, insulin, low-density lipoprotein, cholesterol, high-density lipoprotein cholesterol, total cholesterol, triglycerides, N-terminal pro–brain (B-type) natriuretic peptide (BNP), and high-sensitivity C-reactive protein.
6) The degree of obstructive sleep apnea among the study participants was moderate to severe by design, although excessive daytime sleepiness was uncommon.
7) The adjusted 24-hour mean arterial pressure at 12 weeks was significantly lower in the group receiving CPAP than in either the control group or the group receiving supplemental oxygen.
8) Although the average decrease in blood pressure resulting from CPAPwas modest as compared with the effect of antihypertensive medications, the treatment effect was observed in patients who were already receiving these medications.
9) The effect of CPAP appears to be greatest at night, perhaps reflecting the prevention of postapneic increases in blood pressure and indicating that CPAP may thereby lower the cardiovascular risk associated with the absence of a normal nocturnal reduction in blood pressure.
10) ……the treatment of obstructive sleep apnea with CPAP, but not with nocturnal supplemental O2, results in a significant reduction in blood pressure, even in patients with well-controlled hypertension at baseline.