

Sleep disordered breathing is associated with an increased risk of cancer mortality

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ATS 2012, SAN FRANCISCO – Sleep disordered breathing (SDB), which is associated with an increased risk of adverse cardiovascular events and psychopathological outcomes, is also associated with an increased risk of cancer mortality, according to a new study.

"Recent in vitro and animal studies have shown that repeated episodes of hypoxia (an inadequate supply of oxygen) are associated with accelerated cancer progression," said F. Javier Nieto, MD, PhD, chair of the Department of Population Health Sciences at the University of Wisconsin School of Medicine and Public Health. "Our results are the first to suggest that SDB is also associated with an increased risk of cancer mortality in humans."

The results will be presented at the ATS 2012 International Conference in San Francisco.

The researchers examined 22-year mortality data on 1,522 subjects from the Wisconsin Sleep Cohort, a prospective, community-based study of the predictors and natural history of sleep disorders. SDB was assessed by polysomnography at baseline.

After adjustment for age, sex, body mass index, smoking and other factors, both all-cause and cancer mortality were associated with the presence and severity of SDB in a dose-response fashion. Compared to subjects without SDB, the adjusted relative hazards of cancer mortality were 1.1 for study participants with mild SDB, 2.0 for those with moderate SDB, and 4.8 for those with severe SDB.

The team of University of Wisconsin investigators led by Dr. Nieto conducted this research in collaboration with Ramon Farré, PhD, professor of Physiology at the Unit of Biophysics and Bioengineering at University of Barcelona, Spain. In a separate study which will also be presented at the ATS 2012 conference, Dr. Farré's group and colleagues at the Hospital Clinic-IDIBAPS in Barcelona follow up on their earlier mouse experimental model showing that the effect of intermittent hypoxia on cancer growth is considerably stronger in lean mice than in obese mice.

"The consistency of the evidence from the animal experiments and this new epidemiologic evidence in humans is highly compelling," said Dr. Nieto. "In vitro and animal studies suggest that intermittent hypoxia promotes angiogenesis and tumor growth, which can explain these observations."

"Ours is the first study to show an association between SDB and an elevated risk of cancer mortality in a population-based sample. If the relationship between SDB and cancer mortality is validated in further studies, the diagnosis and treatment of SDB in patients with cancer might be indicated to prolong survival," Dr. Nieto concluded. "Additional studies are needed to replicate our results and to examine the relationships between SDB, obesity, and cancer mortality."

Source: [American Thoracic Society](#)

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