

SLEEP RELATED BREATHING DISORDERS AND SLEEP DISORDERS IN COPD

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Sleep disorders in COPD can be subdivided into two groups: 1. Sleep related disorders of breathing (SRDB) and 2. Sleep disorders (SD). 1. SRDB: Nocturnal hypoxemia (NH) is present in one third of COPD patients, who are normoxemic during wakefulness. NH in COPD especially appears in REM sleep due to several mechanisms: insufficient compensation of airway obstruction, ventilation/perfusion mismatching and impaired chemosensitivity. Most often it is due to hypoventilation. An increase of mortality is dependent on the quality and quantity of NH (increased mortality only in patients with profound and longer periods of desaturation). Therefore oxygen treatment in isolated NH is not generally recommended. NH, however, lead to sleep disorders, which can be effectively treated with oxygen. If hypercarbia is additionally present, non-invasive ventilation has to be applied additionally. About 10 % of COPD patients also suffer from OSA. These "overlap" patients have a high risk of developing a cor pulmonale, their mortality is increased. 2. SD: COPD patients also suffer from several other sleep disorders: In 40-50 % we find insomnia and sleep disruptions, in 20-40 % hypersomnia. More than one third of the patients suffer from a restless legs syndrome (RLS). In COPD, there is a huge amount of reasons, which lead to SD: Airway obstruction, coughing, sputum, gastro-esophageal reflux, SRDB, drugs, depression, and RLS. Thus, taking the sleep history in COPD patients and trying to find a precise diagnosis of the underlying sleep disorder is very important for the right treatment of these patients, which may ameliorate their prognosis and life quality.