# Sleep disorders in patients affected by Lymphangioleiomiomatosis (LAM)

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**Abstract**

LAM is a rare and progressive pulmonary disease characterized by cystic radiological pattern and by the possible presence of angiomyolipomas in other organs. Functionally LAM consists in airway obstruction and progressive hypoxemia leading to respiratory failure. No studies, so far, investigated whether during sleep LAM patients show changes in the sleep profile. Aim of our study was to evaluate if, during sleep, the physiological modification of respiration is associated with polysomnographic (PSG) alterations.

8 patients affected by LAM underwent a whole-night polysomnography. Either respiratory failure or use of long-term oxygen therapy were exclusion criteria.

All patients were female and had a normal BMI. 3 out of 8 patients (37.5%) had alterations to the PSG pattern: 1 patient showed obstructive sleep apnea (AHI 8.6), 1 patient had nocturnal desaturation (SatO2 time below 90% "T90" equal to 17.2%), while 1 patient had nocturnal desaturation (T90 = 27%) and obstructive sleep apnea (AHI 7.5). No arrhythmias were reported. Median sleep efficiency was 91% and median REM latency was 49 minutes. The two patients (25%) with nocturnal desaturation were treated with nocturnal oxygen therapy solving sleep desaturations, showing clinical improvement.

This pilot study underlines the importance of assessing respiration during sleep in patients affected by LAM: these patients have a fragile respiratory balance and the normal physiological sleep modifications could translate in pathological desaturations, worsening the damage.

**Footnotes**

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