Sociedad Española de **Neumología y Cirugía Torácica** SEPAR

COMPLIANCE OF POSA PATIENTS WITH A NEW FOREHEAD VIBRATIL DEVICE. Data not show.

Laura Hidalgo Armas, Sandra Inglés, Rafaela Vaca, José Cordero Guevara, JoaquínDurán-Carro, Jorge Ullate, Ferrán Barbé and Joaquín Durán-Cantolla on behalf of the Spanish Sleep Netwo

Introduction

OSA is a common sleep disorder characterized by repetitive obstruction of the upper airway during sleep, this disorder displays 24-26% prevalence among adult men and increases with age.

Approximately 60% of OSA diagnoses are position-dependent, and approximately 25% have supine isolated events only when lying in the supine position .

Avoidance of the supine position could represent an effective treatment, improving arterial hypertension, cardio- and cerebrovascular diseases, road accidents and quality of life.

The aim of our study is to known the compliance of our forehead positional therapy and to show a complementary data obtained in RCT of validation using the device during 12 weeks,

Methods

Design and settings: Multicenter, randomized, prospective, parallel controlled trial. The design was distributed in three arms:

1) General recommendations (GR) to avoid supine position

2) GR plus inactive device (ID)

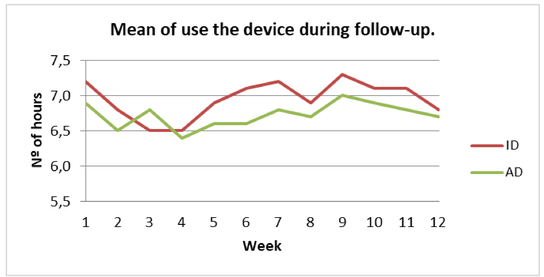
3) GR plus active device (AD).

Participants: Men and women aged ≥18 years who were diagnosed as having POSA, We defined POSA as having an AHI ≥10 and the sleep time in supine double than non-supine position.

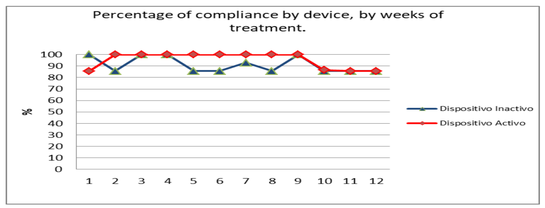
Sleep studies: Full overnight polysomnography was done in the sleep laboratories of the participating centers according to international recommendations, (AASMS 2018) at baseline and 12 weeks after starting the study. Polysomnography recording to be valid for scoring if the total sleep time was longer than 180 minutes.

Randomization: Eligible patients were randomized to one of the three groups. An external unit –the Methodological and statistic Unit of Bioaraba Institute - generated the allocation sequence.

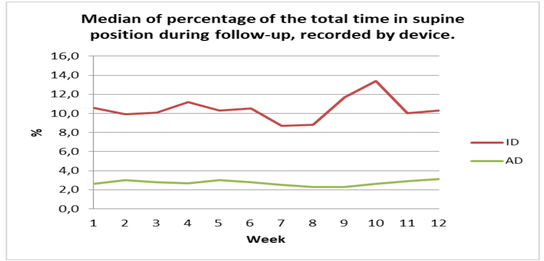
Results



The median use of the device was similar in both groups throughout 12 weeks (p > 0.05 in all weeks, except in week 11, p = 0.048), with variations between 6.5h (IQR= 3.3) (week 3) to 7.3 h(1.8) (week 9) in the ID group. In AD group, the use of the device was between 6.4 h (1.8) (week 4) and 7.0h (1.5) (week 9) .

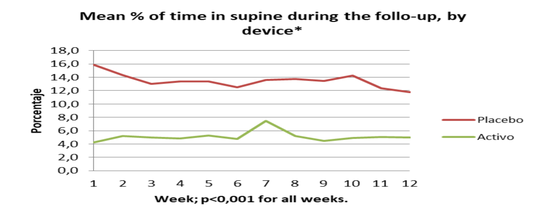


The percentage of days that the device was used more than 4 hours a day by our patients, showed a compliance of a 100% (85.7 – 100) in POSA patient with AD at a month and 85,7% at three months p=0,896



The median percentage of time in the supine position was significantly lower in AD group compared to ID group throughout the 12 weeks (p <0.012 in all weeks in spite of the similar time of using the device.

Also, since the first week the difference of time spent in supine position is noteworthy, reaching a total of 10.6% (14.8) total sleep time in supine positon with ID vs. 2.6% (4.2) AD.



The median percentage of time in supine during follow-up showed a significant decrease. Moreover this trend can be showed in all of weeks reaching at 12 weeks a difference of 7.2% (p <0.001 in all of follow-up weeks).

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Osakidetza

Instituto de Salud Carlos III

IRB Lleida Institut de Recerca Biomèdica

The compliance of active device is high and a significant reduction in the supine position took place.

A conditioned reflex, avoiding the supine position from the start, could be explained by a constant effect of the device over time

EUSKO JAURLARITZA GOBIERNO VASCO OSASUN SAILA DEPARTAMENTO DE SALUD