

Title: Does PREDICT predict real life experience?

Authors: Oscroft NS, Quinnell TG, Davies MG, Smith IE.

Introduction:

The PREDICT trial assessed the therapeutic and economic benefits of continuous positive airway pressure (CPAP) therapy in obstructive sleep apnoea (OSA) patients older than 65 years of age. Patients with a mean age 70.9 years, Epworth sleepiness score (ESS) of 12 and pre-treatment 4% desaturation index (DI) of 29 were treated with CPAP. The treatment effect size was moderate (ESS reduced by 2 over best supportive care) and compliance poor with median hours of use of 1.87/night. We wished to assess the response to CPAP in our practice of those over 65 diagnosed with OSA and treated outside a clinical trial.

Methods:

We collected data on 99 consecutive patients diagnosed with OSA and started on CPAP and followed up at 6 weeks between Sept 2013 and April 2014. Outcomes included ESS, oximetry parameters and compliance. Data were normally distributed and presented as mean (standard deviation). Simple T-tests were used to compare means.

Results:

Complete data sets were collected on 99 patients (24 female) with a mean age of 55.9 (10.5) years, baseline ESS of 13(5) and pre-treatment 4% DI of 27 (19). Twenty two patients were older than 65 years of age.

Metric	Under 65 years (n=77)	Over 65 years (n=22)	p value <65 vs >65
Age (years)	51.7 (7.4)	70.8 (4.1)	0.001
Baseline ESS	13 (5)	12 (4)	0.3
Baseline 4% DI	27.3 (19.6)	27.3 (19.2)	0.99
Baseline mSpO ₂ %	93 (2)	93 (2)	0.43
Post treatment ESS	7 (5.3)	5.5 (4.3)	0.21
Post treatment 4% DI	6.8 (9.4)	8.7 (10)	0.42
Post treatment mSpO ₂ %	95 (3)	95 (2)	0.85
Compliance with CPAP(hours)	5.2 (2.7)	6 (2.9)	0.23

mSpO₂ = mean nocturnal oxygen saturation.

Conclusions:

In clinical practice those over and under 65 appear to respond similarly to CPAP for OSA, at least in the short term. Good compliance with CPAP can be achieved. Compliance figures and treatment effects found within clinical trials do not always reflect real life outcomes. The entry criteria for PREDICT excluded patients in whom the referring physician felt CPAP was mandatory and this may have skewed the data, underestimating the benefits of CPAP in older subjects.

References: Continuous positive airway pressure in older people with obstructive sleep apnoea syndrome (PREDICT): a 12-month, multicentre, randomised trial. McMillan A et al. *Lancet Respir Med* 2014; 2: 804-812