

Recent Advances in The Obstructive Sleep Apnoea/ Hypopnoea Syndrome

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The past decade has seen major advances in our understanding of the morbidity caused by the Obstructive Sleep Apnoea/ Hypopnoea Syndrome. The available evidence indicates that patients with significant daytime sleepiness or two other major features of OSAHS who have more than 15 respiratory events per hour during sleep will show improvements in symptoms, objective sleepiness, driving, quality of life, cognitive function and mood.¹⁻³ Recent studies indicate that such patients will also have small but significant improvements in arterial blood pressure on CPAP⁴⁻⁶ or with mandibular advancement devices.⁷ The improvements in blood pressure are greatest in those who are most hypoxaemic during sleep. Symptomatic patients who have 5-15 events per hour during sleep will have symptomatic benefit, even in a randomised controlled trial⁸ but their longterm usage of CPAP, if this is the modality of therapy employed, is questionable.⁹ Patients who have marked irregular breathing during sleep but are asymptomatic should not currently be treated, as the only randomised controlled trial evidence indicates that there are no benefits from treating them.¹⁰ However, this is a large group of potential patients - maybe up to 6 times as many as are sleepy¹¹ - and more data are needed on this important question. Despite the increasing evidence of need for treatment, clinical services throughout the world are delivering care on an unacceptably slow timescale.¹² The challenge is to ensure that OSAHS is accorded the priority in healthcare and research its prevalence and consequences demand.

REFERENCES

1. Ingleman HM, Martin SE, Deary IJ, et al. Effect of continuous positive airway pressure treatment on daytime function in sleep apnoea/hypopnoea syndrome. *Lancet* 1994;343: 572-575.

- Douglas NJ. Systematic review of the efficacy of nasal CPAP. *Thorax* 1998; 53:414-415.
- 3. Jenkinson C, Davies RJ, Mullins R, et al. Comparison of therapeutic and subtherapeutic nasal continuous positive airway pressure for obstructive sleep apnoea: a randomised prospective parallel trial. *Lancet* 1999;353: 2100-2105.
- Faccenda JF, Mackay TW, Boon NA, et al. Randomized placebocontrolled trial of continuous positive airway pressure on blood pressure in the sleep apnea/hypopnea syndrome. *Am J Respir Crit Care Med* 2001; 163:344-348.
- Pepperell JCT, Ramdassingh–Dow S, Cristhwaite N, et al. Ambulatory blood pressure after therapeutic and subtherapeutic nasal CPAP for obstructive sleep apnoea. *Lancet* 2002;359:204-210.
- 6. Becker HF, Jerrentrup A, Ploch T, et al. Effect of nasal continuous positive airway pressure treatment on blood pressure in patients with obstructive sleep apnea. *Circulation* 2003;107:68-73.
- Gotsopoulos H, Kelly JJ, Cistulli PA. Oral appliance therapy reduces blood pressure in obstructive sleep apnea. A randomized controlled trial. *Sleep* 2004;24:934-41.
- Engleman HM, Kingshott RA, Wraith PK, et al. Randomized placebocontrolled crossover trial of continuous positive airway pressure for mild sleep apnea/hypopnea syndrome. *Am J Respir Crit Care Med* 1999;159: 461-467.
- McArdle N, Devereux G, Heidarnejad H, et al. Long-term use of CPAP therapy for sleep apnea/hypopnea syndrome. *Am J Respir Crit Care Med* 1999;159:1108-1114.
- Barbe F, Mayoralai AR, Dura J, et al. Treatment with continuous positive airway pressure is not effective in patients with sleep apnea but no daytime sleepiness: a randomized controlled trial. *Ann Intern Med* 2001;134: 1015-1023.
- Young T, Palta M, Dempsey J, et al. The occurrence of sleep-disordered breathing among middle-aged adults. N Engl J Med 1993;328: 1230-1235.
- 12. Flemons WW, Douglas NJ, Kuna ST, et al. Access to diagnosis and treatment of patients with suspected sleep apnea. *Am J Respir Crit Care Med* 2004;169:668-672.