P113 CLINICAL USE OF ADAPTIVE SERVO-VENTILATION ACROSS THE UK: RESULTS OF A POSTAL SURVEY

[1]CJ Murphy, [2]D Gosh, [1]S West. *[1]Newcastle Regional Sleep Centre, Freeman Hospital, Newcastle, UK; [2]Sleep & Non Invasive Ventilation Services, St. James's University Hospital, Leeds, UK*

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Introduction Adaptive Servo-Ventilation (ASV) is used to treat central sleep apnoea (CSA), but evidence for its use is limited. A large trial, SERVE-HF, randomised patients with CSA and left ventricular heart failure to ASV or control. Their results led to a field safety notice in May 2015, advising ASV is contraindicated in patients with symptomatic chronic heart failure and reduced ejection fraction. Sleep Centres therefore reviewed ASV in clinical practice; we sought information about ASV use in the UK.
Methods A survey was sent to 187 UK sleep centres, asking about the use of ASV.
Results Seventy-five surveys were returned (40% response rate). ASV was not used in 53% of centres.

Of the 47% (n = 35) of sleep centres using ASV, the average number of patients on ASV per centre was 13 (range 1–69). For comparison, the average number on CPAP was 3368 (range 100–12000).

Of the 454 patients using ASV, the reasons are shown in Table 1.

Abstract P113 Table 1

N (total 454)	%	
149	33	CSA with Cheyne Stokes Respiration (CSR)
126	28	"Central"
61	13	Mixed sleep apnoea
61	13	Reasons not stated/unclear
23	5	Complex sleep apnoea
22	5	Due to opioid/narcotic use
12	3	"Idiopathic"/other causes

Following the field safety notice, 66% of centres reviewed patients in clinic. Others contacted patients by phone (45%) or in writing (31%), or used a combination of these. Five centres did not contact their patients and five centres had to run between one and two additional clinics to review their ASV patients. Some repeated echocardiography.

Seventy-two (48%) CSA-CSR patients were advised to stop using ASV. Fifteen chose to continue, 32 changed to CPAP/NIV, 14 stopped ASV, 11 were not specified.

Clinicians rated ASV as *very useful* (26%), *quite useful* (23%) and *occasionally useful* (49%).
Conclusions There is a wide range of clinical ASV use in sleep centres across the UK; many do not use it. Apart from SERVE-HF, there are few randomised clinical trials to inform who would benefit from ASV. Use may be determined by case series, expert opinion and individual response. This highlights the need for further research in this area.

P114 CAN A DEDICATED 'FAST TRACK' SLEEP SERVICE SUCCESSFULLY ESTABLISH VOCATIONAL DRIVERS ON CPAP WITHIN FOUR WEEKS OF REFERRAL?

BAM Downie, G Olds, M Tomlinson, SD West. *Newcastle Regional Sleep Service, Freeman Hospital, Newcastle Upon Tyne, UK*

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Introduction and objectives Sleepiness due to Obstructive Sleep Apnoea (OSA) can impair driving, and OSA has been implicated in road traffic accidents. DVLA guidelines state that those with "sleepiness sufficient to impair driving" should cease driving until they have been investigated and treated. This may have a significant effect on the ability of vocational drivers to earn a living. Fear of lengthy investigations and licence regulations may deter these patients from seeking treatment. We developed a dedicated service that aimed to diagnose OSA and successfully establish vocational drivers on CPAP within 4 weeks of referral.
Methods The service was advertised to local GPs, encouraging identification of vocational drivers at point of referral. Patients were seen by a nurse specialist and underwent domiciliary sleep studies, returning the following day for results and CPAP therapy. Those who were not identified via GP referral were fast-tracked from first clinic appointment. Compliance and Epworth Sleepiness Score (ESS) were evaluated after one week of treatment on CPAP, or as soon as the patient could attend thereafter.
Results Between September 2014 and July 2015, 29 drivers were referred; one failed to attend. Fifteen held a type 1 drivers' licence and 13 a type 2 licence. At presentation, the mean age was 48 years (range 25–61), mean BMI was 34 (27–51) and mean ESS was 10 (0–21). Sleep studies showed a mean ODI of 30 (0–93), with moderate or severe OSA in 18 (64%). Twenty two patients were commenced on CPAP (79%). Seventeen patients attended for review on CPAP, a mean of 16 days after initiation. Mean ESS was 5.4 and mean CPAP usage was 5.3 h/night. Of these, six people were reviewed between six and eight days after CPAP initiation; their mean compliance was 6.2 h/night (4.1–8.3). Mean time from referral (or first clinic visit) to review on CPAP was 33 days.
Conclusion A fast track service is practical and effective at diagnosing OSA and establishing vocational drivers on CPAP. There were some delays due to patient non-attendance or re-scheduling. It is vital that GPs are aware of the service and refer patients as vocational drivers.

P115 OUTCOMES OF SLEEP STUDIES AND TARGETED THERAPIES IN PATIENTS WITH MYOTONIC DYSTROPHY: A COHORT STUDY

SD West, KN Anderson, J Hughes, A Atalaia, SV Baudouin, H Lochmuller. *Newcastle Upon Tyne Hospitals NHS Trust, Newcastle, UK*

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Patients with myotonic dystrophy (DM) have complex respiratory and neurological disease. Sleepiness is common. We describe a prospective cohort study of patients with DM and response to sleep treatments.

Methods DM patients with daytime sleepiness or symptoms of respiratory failure were referred to the Regional Sleep Centre. They were admitted overnight for sleep study and respiratory assessment. If there was central hypoventilation causing respiratory failure, or obstructive sleep apnoea (OSA), they were offered non-invasive ventilation (NIV) or continuous positive airway pressure (CPAP) respectively. People without sleep disordered breathing with daytime sleepiness were assessed for modafinil, an alerting drug.

Results From May 2011 to May 2015, 120 people with DM had investigations. Mean age was 47 (SD 13, range 18–74), mean BMI 28 kg/m^2 (7, 16–53) and mean Epworth Sleepiness Score 13 (5, 2–24). Mean Muscular Impairment Rating Scale was 3.85 (0.7, 2–5).

Mean FEV1 was 70% predicted (SD 22), FVC 68% predicted (27), with a >15% supine fall in FVC in 18%. PI max, PE max or SNIP were below 50% predicted in 73% of people.

In this cohort, 32 people (27%) had raised CO_2 >6.2 mmHg; NIV was trialled and provided at home in 29 (90% of those in whom it was indicated). Twelve people (37%) have continued this, 17 (53%) have returned it.

Twenty one people (18%) were found to have OSA and 19 commenced CPAP (90% of those in whom it was indicated). This was continued by seven people (33%) and returned by 12 (57%).

Thirty seven people (31%) found to have no evidence of significant sleep-disorderd breathing were assessed for modafinil. Twenty seven people (73% of those in whom this was indicated) attended clinic for this: 16 (43%) had good effect from modafinil and continue on it, 8 (22%) had no effect or intolerance; in three (8%) it was not prescribed.

Thirty people (25% of total cohort) had no sleep disordered breathing and required no further input.

Conclusions DM is a heterogeneous disorder, with varying BMI, sleepiness, muscular and respiratory impairment. Overall, only 35% of the total cohort gained benefit from CPAP, NIV or modafinil and continued with this therapy.

P116 IMPACT OF BARIATRIC SURGERY ON OSAS: A 4-YEAR EXPERIENCE

V Palissery, S Kumar, D Ghosh, M O'Kane, MW Elliott. *Leeds Teaching Hospitals NHS Trust, Leeds, UK*

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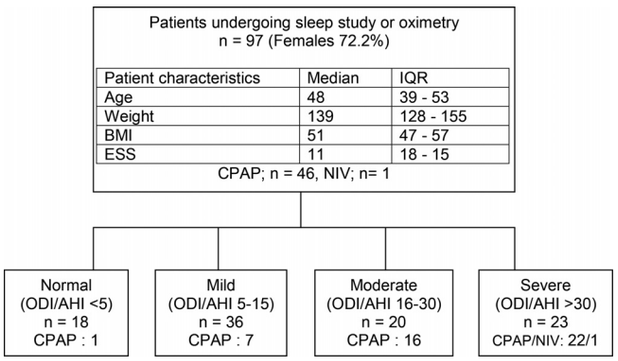
Background Obstructive Sleep Apnoea Syndrome (OSAS) is common in morbidly obese patients. Previous studies indicate bariatric surgery reduces the severity of OSAS but may not cure it. We explored the impact bariatric surgery on patients who were commenced on CPAP prior to surgery.

Methods All morbidly obese patients who underwent bariatric surgery at our institution, between June 2010 and May 2014 who underwent sleep study (SS) or oximetry prior to bariatric surgery were included. The primary end point was cure (oximetry off CPAP showing either ODI less than 5 or ODI 5–15 with ESS <10 and no other symptoms of SDB) from OSAS. Secondary end points were weight loss achieved, improvement in OSAS and improvement in ESS. All data were obtained from electronic bariatric surgery and sleep service databases.

Results 184 patients underwent bariatric surgery. 97 (52.7%) had SS or oximetry prior to surgery. (Figure 1) Mean ODI was 25 (95% CI 19–30) and ESS 12 (95% CI 10–13). Out of 46 patients considered for CPAP, 45 continued using CPAP perioperatively, one discontinued after failed trial. 20 (43.4%) patients were considered cured from OSAS by 12–24 months. 17 (36.9%) patients became asymptomatic and returned CPAP were considered to be cured clinically but not had SS post surgery. At 12 months post bariatric surgery, there were significant ($P < 0.0001$) reductions in various parameters; means of difference in ODI 34, ESS 10 and BMI 17.8.



Abstract P116 Figure 1 Patient characteristics. ESS = Epworth Sleepiness Score, ODI = Oxygen Desaturation Index, AHI = Apnoea Hypopnoea Index

Discussion and conclusion In contrast to the meta-analysis (Greenburg *et al*. 2009) in which 62% had residual disease in our cohort 80% had clinical cure and they had a lower post-op ODI (7.1) in spite of comparable weight loss. Even though our patients had similar pre-op BMI but the mean pre-op ODI was less than most reported studies the reason for which is not clear but might be responsible for a much higher cure rate.

REFERENCE

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P117 COMPARISON OF THE EFFECTS OF CONTINUOUS POSITIVE AIRWAY PRESSURE AND MANDIBULAR ADVANCEMENT DEVICES ON SUBJECTIVE DAYTIME SLEEPINESS IN PATIENTS WITH OBSTRUCTIVE SLEEP APNEA: A NETWORK META-ANALYSIS

DJ Bratton, T Gaisl, C Schlatzer, M Kohler. *Department of Pulmonology, University Hospital Zurich, Zurich, Switzerland*

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Background Obstructive sleep apnoea (OSA) is associated with increased daytime sleepiness. Previous meta-analyses have shown that both continuous positive airway pressure (CPAP) and mandibular advancement devices (MADs) reduce the Epworth Sleepiness Score (ESS), a common measure of daytime sleep propensity. However, no meta-analysis has yet identified which treatment is superior in reducing ESS, perhaps due to a lack of studies directly investigating the two treatments. In addition, the effect of CPAP usage on ESS has yet to be thoroughly explored.

Methods We searched Medline and the Cochrane Library up to the end of May 2015 to identify randomised controlled trials in OSA investigating the effect of CPAP and/or MADs against each other or an inactive control (IC, placebo or no treatment) on ESS. A network meta-analysis was used to incorporate both