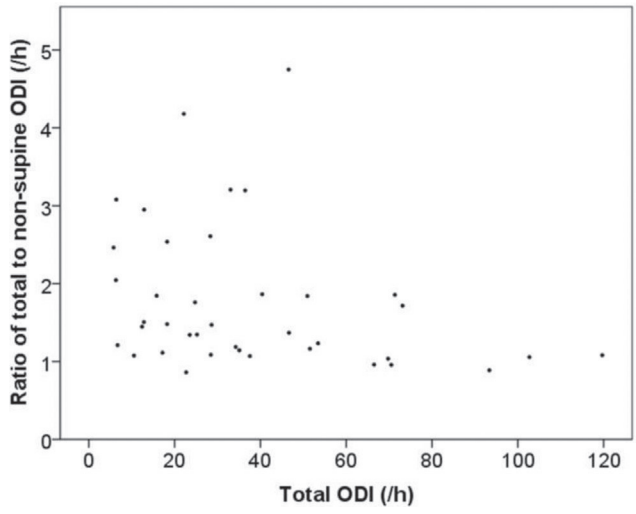

Abstract P71 Figure 1 The relationship between the total ODI and the ration of total to non-supine ODI

REFERENCES

1 Levendowski DJ, *et al*. Assessment of a neck-based treatment and monitoring device for positional obstructive sleep apnea. *J Clin Sleep Med* 2014;**10**(8):863–71.

2 Levendowski DJ, *et al*. Capability of a neck worn device to measure sleep/wake, airway position, and differentiate benign snoring from obstructive sleep apnea. *J Clin Monit Comput* 2015;**29**:53–64.

P72 BASELINE DATA FROM THE ROSA TRIAL: A RANDOMISED CONTROLLED TRIAL OF THE EFFECT OF CPAP ON DIABETIC MACULAR OEDEMA IN PEOPLE WITH CONCURRENT OBSTRUCTIVE SLEEP APNOEA

SD West, J Hughes, B Prudon. *NUTH, Newcastle, UK*

10.1136/thoraxjnl-2016-209333.215

The ROSA trial (Retinopathy and Obstructive Sleep Apnoea) is a multi-centre randomised controlled trial conducted in the United Kingdom. The hypothesis is that CPAP (continuous positive airway pressure) will improve visual acuity in people with diabetic macular oedema and concurrent OSA, due to improvements in intermittent hypoxia, blood pressure and catecholamine surges. An uncontrolled study showed visual acuity improved equivalent to one line on the logMAR chart in those people who used CPAP regularly at six months (Mason RH *et al*. *Respiration* 2012). We present baseline data from a larger randomised controlled trial.

Methods Patients of Eye Hospitals across the UK with diabetic macular oedema and type 2 diabetes were offered home sleep studies to diagnose OSA. These were posted to them with instructions by the coordinating centre and returned by post after a single night's recording. Those patients found to have severe OSA (ODI > 20 or AHI > 30), along with visual impairment due to diabetic macular oedema were randomised to usual ophthalmic care (control) or usual ophthalmic care plus CPAP for one year. Anyone with respiratory failure, excessive daytime sleepiness requiring urgent treatment or cataract precluding ophthalmic assessment was excluded. Follow up occurred at three, six and twelve months and included measures of sleepiness, health related quality of life, visual acuity, optical coherence tomography and retinal photography.

Abstract P72 Table 1

	CPAP N = 64	Control N = 66	P value
Age (years)	65.3 (10.5)	63.7 (9.0)	n.s.
% male	67	79	
Body mass index (kg/m^2)	34.9 (8.7)	35.1 (6.3)	n.s.
Neck circumference (cm)	43.2 (4.1)	44.9 (4.0)	0.017
Duration of diabetes (years)	16.3 (8.7)	15.2 (9.5)	n.s.
HbA1c (mmol/l)	67.0 (17.5)	66.7 (23.1)	n.s.
Oxygen desaturation index/hr	37.2 (18.3)	35.9 (15.1)	n.s.

Results There have been 130 patients randomised from 23 UK centres; 64 to CPAP, 66 to control. The groups are well matched at baseline (Table).

Conclusions This novel study demonstrates that it is feasible to conduct a multicentre randomised controlled trial with UK Eye Hospitals and their local Sleep service, all coordinated by a single centre (Newcastle). The UK NHS National Institute for Health Research has facilitated this research via the Local Clinical Research Network at each centre. Minimisation criteria for randomisation has enabled the two groups to be well matched at baseline, essential for this type of study. The results of this trial will determine whether CPAP could form a novel treatment for diabetic macular oedema and and visual impairment in people with concurrent obstructive sleep apnoea; these results are eagerly awaited when follow up is completed in 2017.

P73 ACUTE NON INVASIVE VENTILATION (NIV)–RELATED NASAL BRIDGE PRESSURE ULCERATION: EFFECT OF A PROACTIVE PREVENTION APPROACH

[1]G Stygall, [1]K Morley, [1]L Pickup, [1]A Oakes, [1]P Antoine-Pitterson, [2]B Chakraborty, [1]R Mukherjee. *[1]Heart of England NHS Foundation Trust, Birmingham, UK; [2]School of Mathematics, University of Birmingham, Birmingham, UK*

10.1136/thoraxjnl-2016-209333.216

Introduction NIV applied via full face masks is increasingly becoming the standard of care in the treatment of acute hypercapnic respiratory failure. Most guidelines suggest good skin care: strategies include regular pressure relief, use of masks with softer cushions/pressure-avoidance masks and application of pressure-relieving dressing to the skin to redistribute pressure and reduce friction. We set out to examine the effect of a systematic proactive prevention approach to prevent Grade 2 Pressure ulcers in a Ward Based Physiotherapy-led acute NIV service in a general hospital serving a population of about 400000. This included (a) prophylactic protective dressing and (b) reactive change to a pressure-avoidance mask for identified Grade 1 pressure sore.

Methods Data was collected from 01/05/2014 and 31/08/2015 which included an 8-month period before (period1) and an 8-month period after (period2) introduction of the proactive prevention approach. Five main sets of data were collected; the NIV mask used (model and size), whether the mask was changed, the total number of days using NIV, pressure ulcer grading and the outcome of the NIV admission. A pressure ulcer was defined as Grade 2 or above.

Results Grade 2 Pressure ulcer rates showed a trend in reduction by over 50% following the change in practice (but fell short of statistical significance: chi-squared test p-value = 0.3). In period1