P197 EFFICACY OF A LOCAL DOMICILIARY NON-INVASIVE VENTILATION (NIV) SERVICE FOR MOTOR NEURONE DISEASE (MND): PATIENT SURVIVAL, SAFETY AND SATISFACTION

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Background NIV is an established treatment for MND patients with ventilatory failure and improves survival by an average of 219 days.[1] NHS England (2013)[2] recommend that MND patients are managed by complex weaning and ventilation centres. However, many patients find travel to hospitals difficult and distressing and therefore will not consider NIV. A Domiciliary NIV service was set up in April 2012 to provide integrated care in patients' homes. A small prospective audit was carried out to investigate survival rates, adverse events and satisfaction with the service.

Method Data were collected prospectively from 18 consecutive patients between April 2012 and June 2015 (169 weeks). NIV was started on onset of reported symptoms. All assessments, titration onto NIV and treatment was carried out in patients' homes.

Results 12 of 16 (75%) patients returned satisfaction questionnaires. 8 of 12 (67%) scored the service 10 (highly recommended) on the visual analogue scale, 4 patients left this blank. 100% responded that they had confidence and trust in the team and preferred to be seen at home. No adverse events were reported by these patients.

Discussion NIV survival with home based care is comparable with the current literature. Of the patients who died, the longest survival was 339 days, 60 days under median survival for those still alive. The reason for this is unclear but may be partly explained by 3 patients with bulbar involvement in this group. Further investigation into this cohort may reveal differences, such as long term feeding. Analysis is required to establish if home care is cost effective.

Abstract P197 Table 1 Survival and days spent on NIV

	All patients n = 18	Still receiving NIV n = 8	Died n = 1
Diagnosis to NIV (days)	359 (30–2076)	376 (134–1448)	359 (30–2076)
Survival from NIV initiation (days)	181 (66–1004)	399 (66–1004)	184 (90–339)
Survival from diagnosis (days)	690 (142–2413)	711 (224–2413)	652 (142–2572)

Data are median (range).

Conclusion MND patients requiring NIV can be safely and effectively managed in a home setting and find this preferable to hospital care. This patient centred model could increase the number of patients offered NIV, subsequently improving uptake.

REFERENCES

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P198 MANAGING VENTILATORY FAILURE IN PATIENTS ON LTOT: A CASE SERIES OF OUTCOMES USING NIV

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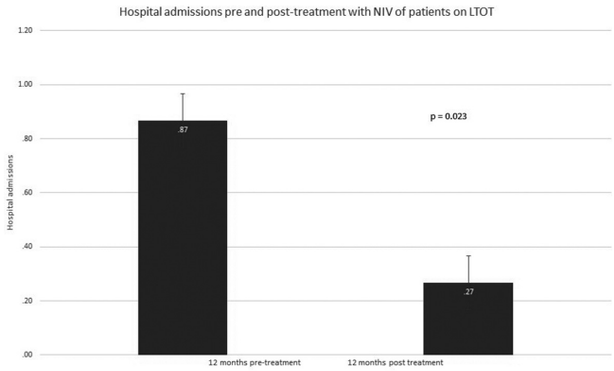
Background Long term Oxygen therapy (LTOT) has been shown to have survival benefits in patients with COPD when therapeutic levels are achieved (PO_2 >8.0 kPa, saturations >92%). But for some patients, loss of hypoxic ventilatory drive, can lead to development of worsening ventilatory failure and symptomatic hypercapnia during oxygen titration. Current guidelines recommend use of nocturnal NIV in conjunction with LTOT in clinically stable patients who develop a respiratory acidosis and/or a rise in $PaCO_2$ by >1 kPa (7.5 mmHg) during an LTOT assessment on two repeated occasions, but the evidence for this approach is lacking. We present a case series of patients on LTOT who were commenced on NIV for this indication, and look at arterial blood gas outcomes, survival time and hospital admissions.

Methods Patients on both LTOT and NIV were identified using our local database and medical notes were reviewed. Results were analysed using a paired T-test and expressed as means with standard deviations.

Results A case series of 15 patients with COPD on LTOT and NIV were identified. The mean (range) age was 68 (53–83) and mean FEV_1% predicted was 29%. Mean (SD) pre-treatment pH on LTOT was 7.36 (± 0.67) and post treatment with NIV pH 7.41 (±0.38), p = 0.089. Mean LTOT pCO_2 was 8.09 kPa (±1.25), and post LTOT/NIV treatment levels dropped to 7.03 kPa (±0.85), p = 0.001; with a significant improvement in PO_2 from 7.26 kPa (±0.64) to 8.87 kPa (±1.15) p < 0.005. PaO_2 increased to therapeutic range (≥ 8.0 kPa) in 80% of patients after commencing NIV with LTOT.

Mean (SD) number of hospital admissions in the 12 months before and after the introduction of LTOT/NIV significantly reduced from 0.87 (±0.74) to 0.27 (±0.59), p = 0.023 (Figure 1). In patients with COPD, the mean survival time from starting NIV in addition to LTOT was 30 months.



Abstract P198 Figure 1

Conclusion The addition of NIV to LTOT therapy can facilitate therapeutic oxygen delivery, whilst managing hypercapnia. Concurrent NIV and LTOT use can also reduce hospital admissions and increase survival times.