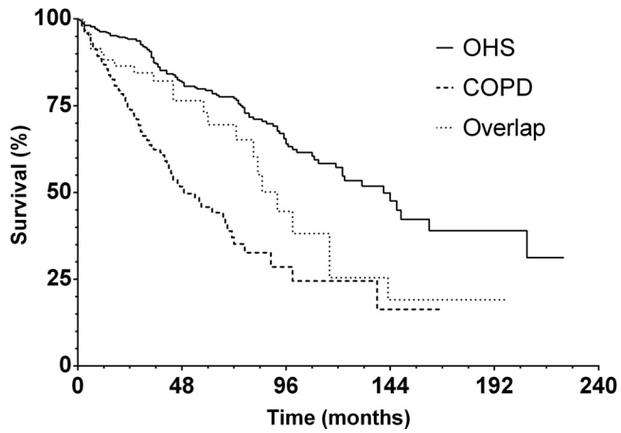
compare the long-term survival of patients with obesity hypoventilation syndrome (OHS), COPD and overlap syndrome who were established on NIV.

Methods All patients with a diagnosis of COPD, OHS and overlap syndrome were identified retrospectively from a patient database. Overlap syndrome was defined as COPD and either OHS or obstructive sleep apnoea resulting in chronic type 2 respiratory failure. The diagnosis was defined at the time NIV was established from medical assessment and respiratory physiology. All patient data was anonymised. A Kaplan-Meier survival analysis was performed. Median survival was estimated for each of the three groups. Survival was compared using Mantel-Cox test, Gehan-Breslow-Wilcoxon test and Log-rank test.

Results In total 463 patients were established on NIV. NIV was initiated on 158 patients with COPD (51% female, 49% male, mean age at set up 66 years), 269 patients with OHS (46% female, 54% male, mean age 62 years) and 36 patients with overlap syndrome (48% female, 52% male, mean age 66 years). The Kaplan-Meier survival curves for the three groups are shown. A clinically and statistically significant difference in survival was observed between the three groups ($p < 0.0001$). Patients with COPD had the worst long term survival compared with patients with OHS and the overlap syndrome. The median survival was 49 months for patients with COPD, 92 months for patients with overlap syndrome and 141 for patients with OHS.

Conclusion Evidence for domiciliary NIV in patients with OHS is well established. There is emerging evidence to support with use of NIV in patients with chronic hypercapnic COPD and low body mass index. Patients with overlap syndrome are a heterogeneous group representing a spectrum from predominately COPD to predominately OHS. Further studies are required to establish if patients with overlap syndrome benefit from NIV and to identify potentially modifiable risk factors associated with a poor outcome.



Abstract P191 Figure 1 Showing the survival for patients with obesity hypoventilation syndrome (OHS), COPD and overlap syndrome

P192 CLINICAL EFFECTIVENESS OF NON-INVASIVE VENTILATION IN PATIENTS WITH MOTOR NEURON DISEASE

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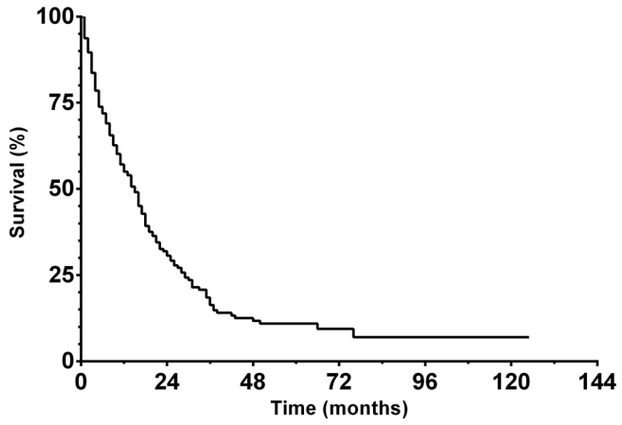
Introduction and objectives The use of long term non-invasive ventilation (NIV) for type II respiratory failure caused by Motor Neuron Disease (MND) is well recognised. In patients with MND and good bulbar function, NIV has been shown to improve survival and quality of life.[1] NIV use in patients with MND has increased since the publication of the National institute of Clinical Health Excellence guidelines in July 2010. Our objective was to identify the clinical effectiveness of NIV in all patients with MND referred to a large tertiary referral teaching hospital service.

Methods All patients with MND established on NIV were identified retrospectively from a clinical database. Patients were excluded from the analysis if there was another diagnosis as the main indication for establishing NIV. All patient data was anonymised. A Kaplan-Meier survival analysis was performed and the median survival was estimated.

Results 222 patients with MND established on NIV were identified. The median age was 64 years (range 19–90 years). One hundred and forty patients (63%) were male and 82 (37%) female. The median survival was 436 days on NIV. The Kaplan-Meier survival curve is shown below.

Conclusion A median survival of 436 days compares favourably with the median survival of 219 days identified in patients with MND receiving NIV in the trial by Bourke *et al*. Our patient cohort included patients with both limb onset and bulbar onset forms of the disease. The impact on survival may, in part, be due to NIV but overall improvements in medical care, supporting adequate nutrition and assisted cough techniques in a specialist centre will have contributed.



Abstract P192 Figure 1 Showing the survival of patients with motor neurone disease receiving NIV

REFERENCE

1 Bourke SC, *et al*. Effects of non-invasive ventilation on survival and quality of life in patients with amyotrophic lateral sclerosis: a randomised controlled trial. *Lancet Neurol*. 2006;**5**:140–7

P193 HOW SAFE IS DOMICILIARY CHANGE OF TRACHEOSTOMY TUBE IN VENTILATOR DEPENDENT PATIENTS?

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Introduction Tracheostomy ventilation (T-HMV) is indicated in a small group of patients with chronic ventilatory failure. These