Service Priorities and Programmes

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Oxygen Therapy Assessment Clinic in monitoring the appropriateness of long-term (LTOT) and short-term oxygen therapy (STOT)

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Introduction

Oxygen therapy is commonly administered to patients in hospital, but prescribing and monitoring of such therapy may be suboptimal, particularly after discharge. Inappropriate oxygen administration can result in patient harm. In order to achieve "The right patient receives the right amount of home oxygen for the right period of time", An Oxygen Therapy Assessment Clinic (OTAC) which includes respiratory nurses, respiratory physicians & physiotherapists with a structured assessment and follow-up service had been set up since 2014 for the assessment & monitoring of patients being discharged with home oxygen therapy.

Objectives

To evaluate the usefulness of an Oxygen Therapy Assessment Clinic (OTAC) which is run by respiratory nurses and physiotherapists.

Methodology

A prospective study in patients who were referred to OTAC was carried out from October 2014 to October 2015. The patients are either being prescribed on oxygen therapy or referred from physicians for consideration of LTOT. Transcutaneous carbon dioxide (TCO2), pulse oximetry saturation level (SpO2), dyspnea level (visual analogue scale: 1-10) and perceived exertion level (Borg scale:6-20) are measured. The following would also be measured if necessary: (a) arterial blood gas or venous blood for pH and HCO3; (b) Exercise test with 6-minute walk by physiotherapist; (c) Nocturnal SpO2 saturation. Pre- and post-educational questionnaire assessments were carried out, with at least more than one month's interval. An evaluation survey form was also provided after the last attendance to assess the overall satisfaction.

Result

Thirty-two subjects (mean age 72) were included with 22 (68.7%) were already on LTOT. Twenty (62.5%) were males and 31 (96.9%) was either ex-smoker or non-smoker. Nineteen (59.4%) were COPD and 16 (50.1%) could manage one flight of stairs while five (15.6%) were unable to climb stairs because of dyspnea or being wheel-chair bound. The initial dyspnea level (1-3) and perceived exertion level (6-11)

were mild for 15 (46.9%) and 16 (50%) respectively. Oxygen concentration was adjusted for 31 (96.9%): titrated up in 13 (41.9%) and down in 14 (45.2%). Domiciliary oxygen was eventually tailed off in 4 (12.9%). Overnight SpO2 monitoring was arranged in 15 (46.9%) to detect nocturnal desaturation or oxygen titration. Nine (90%) out of 10 patients who had not been on oxygen were found to require LTOT. Clinical admissions were arranged for 2 (6.3%) with high TCO2 parameter (7.8-9.8kpa) and continuous SPo2 desaturation (85-88%) despite oxygen (2L/min) was given. Compliance rate was significant better after attending OTAC, 81.5% vs. 44.4% ($p< 0.05$). Knowledge on oxygen therapy was significantly improved after attending OTAC ($p=0.001$). Conclusion Home oxygen therapy was often inappropriately used with inadequate monitoring and reassessment after initial prescription. OTAC can be a useful follow-up model in these patients.