European Respiratory Society
Annual Congress 2013

Abstract Number: 2615

Publication Number: 3335

Abstract Group: 9.2. Physiotherapists

Keyword 1: COPD - management **Keyword 2:** Gas exchange **Keyword 3:** Exercise

Title: Ventilatory and metabolic response of self-paced versus externally-paced tests in COPD patients

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Body: We aimed to assess the ventilatory and metabolic response of comparing self-paced versus externally-paced tests in COPD patients. Eleven patients were recruited and 9 (5M) were include in the study, with age $_{yrs}$ 65 (IQR: 62.5-72.5); BMI $_{kg/m2}$ 26.3 (IQR: 23.5-31.5); FEV $_{1\ \%pred}$ 49.1 (IQR: 32.9-65.5). The patients performed four self-paced tests, Glittre Activity of Daily Living-test (Glittre-ADL), 6, 3 and 2 minute walking test (6MWT, 3MWT and 2MWT) and one externally-paced test, incremental shuttle walking test (ISWT). All tests were performed following guidelines. During all tests breath-by-breath gas analyses were studied with a portable telemetric system. Dyspnea and fatigue of lower limbs were assessed through modified Borg scale. At peak exercise no significant differences were observed in all tests in terms of dyspnea, fatigue, ventilatory and metabolic variables (table 1). Steady-state oxygen uptake was observed during Glittre-ADL, 6MWT and 3MWT with plateau after the second lap (Glittre-ADL) and second minute (3MWT and 6MWT). During 2MWT and ISWT no steady-state oxygen uptake conditions were reached.

In COPD patients, self-paced and externally-paced tests show similar ventilatory and metabolic requirements. However, only Glittre-ADL, 3MWT and 6MWT determine a steady-state oxygen uptake during their execution, characterizing submaximal tests in patients with COPD.