Abstract Group: 11.1. Lung Cancer
Keyword 1: Lung cancer / Oncology Keyword 2: Systemic effect Keyword 3: Quality of life

Title: Docetaxel-related peripheral neuropathy is a dose-dependent event; a retrospective study in a Greek population with NSCLC

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Body: INTRODUCTION: Neurotoxicity is the most important non-hematologic toxicity of taxanes. It presents as peripheral neuropathy with tingling, numbness and pain with a “glove and stocking” distribution and influences the daily activities of patients treated with taxanes. AIM: To record peripheral neuropathy in relation with the dosage of docetaxel in NSCLC. METHOD: We retrospectively studied 700 consecutive files of patients from the archive of the oncology unit of our institution in treatment from December 2006 until May 2008. Election criteria includes patients with NSCLC, PS 0-2, any stage, treated with docetaxel in any combination. We evaluated peripheral neuropathy with CTCAEv3.0 RESULTS: We found 105 patients, 84 males(80%), 21 females(20%), median age 62.94±9.29, smokers 95(90.5%), median dose of docetaxel 74.42±7.88mg/m2, median aggregate dose 427.17±282.9mg, dose intensity 32.63±5.88mg/m2/week, median treatment duration 12.6±7.99weeks. Peripheral neuropathy presented in 28 (26.7%) patients, mild or moderate gravity, mainly sensory neuropathy in 75%, after 2.64±1.68 cycles. The group of patients who received docetaxel ≥ 80mg/m2 presented neuropathy at 37.5% versus 21.9%(P=0.09). The group with dose intensity ≥37.5mg/m2/week presented neuropathy at 47.1% versus 16.9%(P=0.001). In the group of aggregate load dose ≥600 mg, 51.6% presented neuropathy versus 16.4% with <600 mg(P=0.0001). Neuropathy was a reversible adverse event in 25 of 28 patients. CONCLUSION: Peripheral neuropathy is a dose-dependent adverse event that increases with the accumulation and the dose intensity of docetaxel. Symptoms usually resolve after treatment or by decreasing the dosage.