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BRIEF REPORT
Ocular Toxicity Secondary to Paclitaxel in Two Lung Cancer Patients

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Ocular toxicity has been reported in patients with breast cancer and ovarian cancer treated with paclitaxel. This adverse effect occurs more frequently in patients who have received single doses greater than 250 mg/m^2. We describe two male patients given paclitaxel & carboplatin who developed ocular toxicity secondary to paclitaxel. The first was a 65 year-old male with stage IV squamous cell lung cancer metastatic to the liver. Physical examination revealed a right pleural effusion and hepatomegaly. The bone scan and CT of the brain revealed no metastases. During cycle 1 of chemotherapy, he received carboplatin 507 mg followed by paclitaxel 416 mg (225 mg/m^2) with no adverse effects. Three weeks later, he received cycle 2 (paclitaxel 416 mg and carboplatin 588 mg), and one hour into the paclitaxel infusion developed blurred vision, saw flashing lights, and complained of a tingling sensation in both hands. These symptoms gradually disappeared 2 hours post-infusion. Fundoscopic examination was normal, and he subsequently received 3 more cycles without recurrence of symptoms. The second patient was a 45-year-old male with stage IV adenocarcinoma of the lung with liver and bone metastases. Past medical history was significant for myocardial infarction and hypertension. Physical examination revealed a right supraclavicular node and right pleural effusion. The bone scan was positive for hip metastasis, however the CT of the head was negative. Cycle 1 of chemotherapy consisted of carboplatin 864 mg followed by paclitaxel 477 mg (225 mg/m^2). He developed blurred vision with flashing lights and numbness of the right hand during the last 30 minutes of the paclitaxel infusion. Fundoscopy was normal. Following completion of the paclitaxel infusion, he had complete resolution of symptoms within one hour. This patient received 5 subsequent cycles of the same regimen without recurrence of symptoms. The infusions in both patients continued without interruption.

Sensory, motor, autonomic, and myopathic toxicities are the common neurologic side effects secondary to paclitaxel [1]. Ocular toxicity is a rare complication of the drug. It is thought to be vasospastic in nature because of the lack of sequelae [2]. This symptom, also known as photopsia, usually appears during the last 30 minutes of the infusion and resolves completely within 3 hours [3]. It usually occurs in patients who receive doses of 250 mg/m^2 or more, but rarely can develop at doses of 175 mg/m^2 given intravenously or 75 mg/m^2 given intraperitoneally [5]. Some patients develop visual evoked-potential abnormalities typical of demyelinating optic neuropathy [4]. Flunarizine, a selective calcium channel antagonist, has been used successfully to treat one patient with this condition [5].

Carboplatin has been shown to produce maculopathy and optic neuropathy weeks after its administration, causing cortical blindness in patients with renal dysfunction [6,7]. Both patients developed ocular symptoms toward the end of the paclitaxel infusion which disappeared after discontinuation of the drug. In addition, these patients had no evidence of macular or retinal lesions and had normal renal function. Although we can not ascertain whether carboplatin may have had an additive effect, we believe that paclitaxel was the primary cause of the ocular symptoms in our patients. There appear to be no sequelae from this toxicity; however, it can be quite alarming to patients. As a result, clinicians should be aware of this potential adverse effect.

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