

Taxus baccata allergy in a breast cancer patient

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Dear Editor,

We present a case report of docetaxel hypersensitivity in a breast cancer patient with known *Taxus baccata* allergy. A 42-year-old woman was diagnosed with triple-negative breast cancer pT1cN0Mx. Adjuvant chemotherapy constituted of doxorubicin 50 mg/m², cyclophosphamide 500 mg/m² and docetaxel 75 mg/m² every three weeks on day 1 for six cycles. She disclosed that while walking her dog, she experienced dyspnoea and pruritus when passing *Taxus baccata* trees. Standard dexamethasone 8 mg twice daily premedication was administered on day -1, 1 and 2. Therefore, we decided to start treatment without further adjustments. Less than five minutes after start of the first docetaxel administration of 120 mg in 250 ml saline solution, she experienced dyspnoea and pain in the chest and back. Physical examination revealed tachycardia of 102 beats/min with a normal blood pressure of 143/83 mmHg. After cessation of docetaxel and administration of clemastine 2 mg intravenously according to our local protocol, the symptoms quickly dissolved and her heart rate returned to normal. After 15 minutes, the docetaxel administration was restarted with a reduced flow of 15 ml/hour in the first 15 minutes and then slowly increasing to 100 ml/hour during the next 15 minutes, 200 ml/hour in the next 15 minutes and finally 250 ml/hour for the duration of the remainder of the infusion. The following administrations of docetaxel were given with clemastine 2 mg and dexamethasone 10 mg intravenously in addition to the standard premedication. Also, the speed of docetaxel administration was given with a stepwise acceleration, as described above. She completed treatment without any major side effects.

Docetaxel is a semi-synthetic taxane originally extracted from the needles of the European yew tree (*Taxus baccata*). Despite dexamethasone premedication, hypersensitivity was observed in up to 13.4% of all breast cancer patients treated with docetaxel-based chemotherapy.^{1,2} In a study of 160 test subjects, an association between *Taxus* sp. pollen

allergy and anti-paclitaxel IgG detection in sera was found, suggesting that an association between *Taxus* allergy and docetaxel-induced hypersensitivity reactions may also be present.³ The definite aetiology of hypersensitivity reactions during docetaxel treatment remains unclear. We recommend adjustments in the docetaxel infusion rate and premedication in patients with known *Taxus baccata* allergy, in addition to standard dexamethasone premedication.⁴ In this era of personalised care for cancer patients, we should invest in the early recognition of increased risk for docetaxel-induced hypersensitivity reactions in order to perform patient-tailored treatment adjustments, as suggested in our case report.

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