ABSTRACT

Herbicide Exposure and the Risk of Transitional Cell Carcinoma of the Urinary Bladder in Scottish Terrier Dogs

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Objective: To determine whether exposure to lawn or garden chemicals was associated with an increased risk of transitional cell carcinoma (TCC) of the urinary bladder in Scottish terriers.

Design: Case-control study.

Animals: 83 Scottish terriers with TCC (cases) and 83 Scottish terriers with other health-related conditions (controls).

Procedure: Owners of study dogs completed a written questionnaire pertaining to exposure to lawn or garden chemicals during the year prior to diagnosis of TCC for case dogs and during a comparable period for control dogs.

Results: The risk of TCC was significantly increased among dogs exposed to lawns or gardens treated with both herbicides and insecticides (odds ratio [OR], 7.19) or with herbicides alone (OR, 3.62), but not among dogs exposed to lawns or gardens treated with insecticides alone (OR, 1.62), compared with dogs exposed to untreated lawns. Exposure to lawns or gardens treated with phenoxy herbicides (OR, 4.42) was associated with an increased risk of TCC, compared with exposure to untreated lawns or gardens, but exposure to lawns or gardens treated with nonphenoxy herbicides (OR, 3.49) was not significantly associated with risk of TCC.

Conclusions and Clinical Relevance: Results suggest that exposure to lawns or gardens treated with herbicides was associated with an increased risk of TCC in Scottish terriers. Until additional studies are performed to prove or disprove a cause-and-effect relationship, owners of Scottish terriers should minimize their dogs' access to lawns or gardens treated with phenoxy herbicides. (J Am Vet Med Assoc 2004;24:1290-1297)