

Statement on Thiazide Diuretics and Skin Cancer

April 19, 2021.

Concerns have recently been raised about skin cancer risk and thiazide diuretics. Our experts have reviewed the paper by Drucker and colleagues published in the CMAJ on April 12, 2021.

In this well-conducted population study, the authors matched 302,634 adults >66y of age with a first prescription for an antihypertensive medication to 605,268 age and sex matched patients not receiving an antihypertensive medication. They found the following associations in patients taking a thiazide or thiazide-like diuretic:

- For keratinocyte (non-melanoma) skin cancer, an adjusted hazard ratio of 1.08 (95% confidence interval 1.03-1.14) per defined annual dose unit (i.e. hydrochlorothiazide 25 mg daily for 1 year)
- For melanoma, the adjusted hazard ratio was 1.34 (95% confidence interval 1.01-1.78)

Taken in context, the absolute risk of skin cancer (which varies with exposure, genetics and location) is low (we estimate that treatment of 9000-14,000 patients with a thiazide for one year would lead to one extra case of melanoma). In contrast, the risk of hypertension-related complications are high (stroke, heart attack, kidney failure, etc). And, blood pressure control rates have recently been declining in Canada, especially in mature women. We have great concerns that some patients may stop their antihypertensive medications, compounding the problem.

Observational studies cannot always assess and adjust for potentially important confounding cancer risks such as dietary risks, smoking, obesity and sun exposure. These studies can generate hypotheses of risk but cannot provide proof of causality. Indeed, hypertension itself has been associated with cancer risk.

Hydrochlorothiazide, indapamide, and chlorthalidone diuretics are important first line treatment options for hypertension in the Hypertension Canada 2020 Guidelines. They reduce the risk of death, stroke, heart failure and heart attack. We recommend that patients taking thiazides and who are concerned about the hypothetical risk should speak with their physician or pharmacist. Moreover, we recommend much more important skin cancer prevention measures such as limiting sun exposure and use of sunscreen.

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