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Risks of Squamous Cell Carcinoma of The Lip and Cutaneous Melanoma in Older Australians Using Hydrochlorothiazide (HCTZ)

Daniels, B^{1*}, Pearson, S-A¹, Vajdic, CM², Pottegård, A³, Buckley, NA⁴, and Zoega, H¹

¹Medicines Policy Research Unit, Centre for Big Data Research in Health, UNSW Sydney, Australia

²Cancer Epidemiology Research Unit, Centre for Big Data Research in Health, UNSW Sydney, Australia

³Clinical Pharmacology and Pharmacy, Department of Public Health, University of Southern Denmark, Denmark

⁴Clinical Pharmacology and Toxicology Research Group, Discipline of Pharmacology, University of Sydney, Australia

Introduction

HCTZ is first-line treatment for hypertension and among the most commonly used medicines in Australia. Recent evidence suggests increased risks of lip and skin cancers in association with HCTZ use.

Objectives and Approach

To determine the risk of SCC of the lip and melanoma among people prescribed HCTZ in Australia we conducted a case-control study nested within a cohort of Department of Veterans' Affairs clients 65 years and older in 2004-2015. We identified incident cases of SCC of the lip (lip cancer) and of cutaneous melanoma (malignant melanoma), each matched by sex and age with up to 20 controls through risk-set sampling. We ascertained HCTZ use from dispensing data and classified use according to ever/never use and cumulative use. We estimated odds ratios (ORs) associating HCTZ use with lip cancer and malignant melanoma using conditional logistic regression, adjusting for predefined confounders obtained from dispensing and hospitalisation data.

Results

For lip cancer (45 cases) ever-use of HCTZ yielded an OR of 2.6 (95%CI: 1.4–5.0) and high HCTZ use ($\geq 25,000\text{mg}$) an OR of 4.7 (1.61–13.7). For malignant melanoma (659 cases) ever-use of HCTZ resulted in an OR of 1.2 (1.0–1.5) and high HCTZ use in an OR of 1.2 (0.8–1.8).

Conclusion / Implications

Our study provides further evidence that the photosensitising properties of HCTZ may promote SCC carcinogenesis, and possibly melanoma, in susceptible sun-exposed tissues. Our findings are the first from the Australian population—already at elevated risk of developing skin cancer—and add to the growing body of data supporting the need for skin cancer prevention advice and behaviours, and potentially heightened surveillance, for individuals prescribed this medication.

*Corresponding Author:

Email Address: b.daniels@unsw.edu.au (B Daniels)