

Hydrochlorothiazide Use and Risk of Skin Cancer: A Population-based Retrospective Cohort Study

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Abstract

Purpose Exposure of hydrochlorothiazide (HCTZ) has been linked to the increase of skin cancer in the Caucasian population, especially for the squamous cell carcinoma (SCC) but not for basal cell carcinoma (BCC). This study aimed to evaluate the risks of skin cancer between patients receiving HCTZ and those receiving other antihypertensives. **Methods** This retrospective cohort study was derived from the National Health Insurance Database in Taiwan. We enrolled patients aged 20 years and older who newly receiving antihypertensive medications between 2004 - 2015. We calculated the medication possession ratio (MPR) of the first two years of treatment for patient enrollment and treatment classification, in which patients with MPR above 80% were enrolled and patients were subsequently categorized into receiving HCTZ, other thiazide diuretics, non-thiazide diuretics, and non-diuretic antihypertensives. The Cox proportional hazards model was used to evaluate the risk of skin cancer, and further divided into SCC, and BCC. **Results** Our study enrolled 41,086, 27,402, 19,613, and 856,782 patients receiving HCTZ, other thiazide diuretics, non-thiazide diuretics, and non-diuretic antihypertensives, respectively. We found BCC risks were similar when comparing HCTZ with other thiazides (adjusted hazard ratio, 0.84; 95% CI: 0.54-1.33), non-thiazide diuretics (0.93; 0.51-1.67), and non-diuretic antihypertensives (0.91; 0.66-1.26). Higher SCC risk was observed in the HCTZ group, compared to other thiazide (1.24; 0.74-2.08), non-thiazide diuretics (1.32; 0.70- 2.51), and non-diuretic antihypertensives (1.23; 0.87-1.73), although the differences were not statistically significant. **Conclusions** We conclude that skin cancer need not be of major concern to physicians when prescribing antihypertensives for an Asian population.

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