Prevention of allopurinol-associated adverse cutaneous drug reactions in high-risk patient groups in Canada

Two recent Canadian publications[1,2] have highlighted the importance of screening at-risk populations for the development of severe cutaneous adverse drug reactions to the uric acid–lowering medication, allopurinol. These reactions, including Stevens–Johnson Syndrome, toxic epidermal necrolysis and drug reaction with eosinophilia and systemic symptoms (DRESS), can lead to prolonged hospital admissions, elevated morbidity or mortality, and long-term sequelae. At-risk East Asian populations can be tested for presence of the *HLA-B*58:01* genotype before allopurinol is prescribed, eliminating the risk of severe cutaneous adverse reactions owing to this drug in this population. Unfortunately, *HLA-B*58:01* genotype testing is underutilized in British Columbia, even though East Asian people are a substantial proportion of the population.[1] The study by Yokose and colleagues published in *CMAJ*[2] clarifies other risk factors for severe cutaneous adverse drug reactions, such as heart disease and chronic kidney disease, and was also conducted using a BC data set.[2]

Both studies show the need to increase use of preventive screening. Lead prescribers of allopurinol are primary care providers, internists, rheumatologists and emergency department physicians. Knowledge translation to allow for prevention of severe cutaneous adverse drug reactions can be achieved by physician-directed programs that highlight which groups are at risk, and availability of *HLA* testing; patient educational programs to increase awareness of severe cutaneous adverse drug reactions related to allopurinol, and the need for preventive genetic testing; and electronic information system "pop-ups" in hospital and community pharmacies, to prompt pharmacists to assess whether *HLA* testing is indicated or has been ordered. This strategy is crucial to eliminating severe cutaneous adverse drug reactions owing to allopurinol.

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■ Cite as: *CMAJ* 2020 February 18;192: E168. doi: 10.1503/cmaj.74133

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2. Yokose C, Lu N, Xie H, et al. Heart disease and the risk of allopurinol-associated severe cutaneous adverse reactions: a general population-based cohort study. *CMAJ* 2019;191:E1070-7.

Competing interests: None declared.