ADVERSE DRUG REACTIONS, INCLUDING SJS, TEN

KNOWLEDGE AND OPINIONS AMONG CANADIAN ACADEMIC PRACTITIONERS REGARDING PHARMACOGENETIC SCREENING TO PREVENT SEVERE CUTANEOUS ADVERSE DRUG REACTIONS

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Introduction: Carbamazepine and allopurinol are among the most frequent causes of drug-induced Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN). Individuals carrying the HLA-B*15:02 allele (prevalent in East and Southeast Asian populations) taking carbamazepine and individuals carrying the HLA-B*58:01 allele (present in both Asian and European populations) taking allopurinol are genetically predisposed to developing SJS/TEN. The incidence of SJS/TEN can be greatly reduced through genetic screening for these alleles and avoiding these medications allele-positive patients. Screening has not been universally adopted, especially in North America.

Objective: The purpose of study was to evaluate the knowledge and opinions of practicing academic physicians on genetic screening to prevent drug-induced SJS/TEN and to educate them on the topic.

Methods: 2188 physicians affiliated with the Departments of Medicine, Psychiatry, and Family and Community Medicine at the University of Toronto were sent an online survey which included questions on knowledge, opinions, and practices regarding carbamazepine- and allopurinol-induced SJS/TEN. Data collection occurred from April 4, 2018 to May 1, 2018.

Results: We collected 261 complete and 33 partial responses from different medical specialties and practice settings. Most physicians were aware of carbamazepine (72% overall) and allopurinol (57% overall) as common inducers of SJS/TEN. There was,

however, a general paucity of knowledge among surveyed physicians concerning the ethnicities at risk and the clinical availability of pharmacogenetic screening to prevent SJS/TEN. Dermatologists (i.e. physicians managing SJS/TEN) were significantly more knowledgeable on these aspects than physicians in specialties tending to prescribe carbamazepine and allopurinol.

Conclusions: While overall awareness was low, the survey was successful in highlighting the importance of the topic among practitioners. Many reported their plans to begin screening in their practice and a need for systemic implementation. Policies are needed from health authorities, and future studies should investigate documented quality of care outcomes.