

Publication

HLA-associated adverse drug reactions - scoping review.

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Alleles of the human leukocyte antigen (HLA) system have been associated with the occurrence of idiosyncratic adverse drug reactions (ADRs). Accordingly, it is assumed that pre-emptive testing for the presence of certain HLA alleles (HLA-typing) could prevent these ADRs in carriers. In order to perceive the current evidence for HLA-associated ADRs, we conducted a scoping review according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The literature search on PubMed and on Embase was carried out on the July 8 and 9, 2020, respectively. To be included in the scoping review, the studies had to investigate an association of any HLA-associated ADR with any small molecule approved and available on the Swiss market. We considered English and German primary literature published since 2002. A total of 149 studies were included, whereof most were retrospective, whereas one was a prospective randomized controlled trial. The majority of the studies (n=33) described the association of HLA-B*15:02 with carbamazepine. It was not possible to directly compare the studies, as they were too heterogeneous in terms of the ADR definition, the HLA alleles, the number of participants, and the study types. Therefore, we summarized the results in a descriptive manner. Even if an interpretation of the outcomes remains open, the descriptive overview revealed the prevailing complexity and uncertainty in the field. For the future, consistent definitions on the different phenotypes need to be established and applied and the reporting of association studies should follow a harmonized structure.

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