S13-4 Exploratory study on biomarkers associated with severe cutaneous adverse reactions

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Most of adverse drug reactions (ADRs) occur as an extension of pharmacological effects. They occur dependently on their blood concentrations and can be potentially reduced by controlling their dose. On the other hand, ADRs categorized as Type B usually occur irrelevantly to their pharmacological effects at different organs from their target, and are often life-threatening and unpredictable. The incidences of Type B ADRs are very low. Severe cutaneous adverse reactions including Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are delayed allergic reactions in which T-cells are involved and categorized as Type B ADRs. Recent progress of pharmacogenomic studies has revealed that particular types of HLA class I antigens have strong association with severe cutaneous adverse reactions and that the associations are specific to causative drugs, phenotypes of adverse reactions and ethnic groups. We established a research group in 2006 with professionals of pharmacogenomics, dermatologists, ophthalmologists and psychiatrsts to explore genetic biomarkers associated with Japanese SJS/TEN patients. To date, we have collected more than 100 Japanese SJS/TEN patients through participating institutes and a case-collecting system covering all over Japan constructed by us. No carriers of *HLA-B*1502* which was reported to have extremely strong association with carbamazepine-induced SJS/TEN in Han Chinese and south Asians, although a moderate association between alopurinol-induced SJS/TEN and *HLA-B*5801* detected in Han Chinese was observed.