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## Excluding adverse drug reactions via HLA genetic test, an interesting case

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Adverse drug reaction (ADRs) is a problem of interest worldwide; it is an important cause of admission to hospital and affect individual health. At the early 1970, the WHO defined ADRs as “a response to a drug that is noxious and unintended and occurs at doses normally used in man for the prophylaxis, diagnosis or therapy of disease, or for modification of physiological function”. The mainly noticed ADRs are hypersensitivity reactions, characterized by variant symptoms including cutaneous reactions, bronchospasm, and multiple organ involvement up to anaphylaxis, with time to appear including few hours up to weeks. ADRs pathophysiological explanation still not quietly understood current approaches include immune reaction via interactions with human leucocyte antigens (HLA); the pleomorphic glycoproteins that are located on chromosome six, which are of an increasing interest in the predication & diagnosis of ADRs.

My case Mr. JM, 43 years old male present to internal medicine ward at the seventh. June 2019 (with a previous history of cefotaxime allergy), after he developed generalized skin rash and high-grade fever after ingesting his medications (allopurinol & unspecified anti-inflammatory drug; perhaps diclofenac) lasted for 3 days. After 3 days of hospital management (Intravenous fluids, Parenteral steroids, antihistamines & topical soothing agent) he was discharged with wide spread of red skin rash on his trunk, upper limbs & chest. Our physicians suggest that pt. developed Steven Johnson syndrome, later medical follow up another dermatologist told him that his illness was merely shingles.

I asked the pt. for his agreement to be pictured by my colleagues [below], and to do him DNA extraction & genetic

test to reveal his case on my own behave. After his agreement, he was subjected to HLA typing with polymerase chain reaction at April 2021, his HLA genotypes were HLA-A 01:01/02:02 & HLA-B 15:10/73:01. Both HLA-genotypes were not related to allopurinol induced drug reactions, which confer his late diagnosis with shingles.

**Keywords:** Adverse drug reactions, HLA genotype, Allopurinol, Cefotaxime



**Figures:** Mr JM cutaneous reaction at day two of management, after hospital admission

### Biography

Alaa F. Hassan, a [pharmacist](#) has completed M.Sc. Pharmacology at the age of 28 years from [Al-Mustansiriyah University](#), college of Medicine. She is the head of drug information centre & pharmacovigilance member. He has published two papers in reputed journals, 1 book chapter and has been serving as a [peer-reviewer](#) at request since 2019.

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