

Drug hypersensitivity and urticaria

全以祖

台大醫院新竹分院 風濕免疫暨過敏科

Urticaria is a cutaneous reaction characterized by the appearance of pruritic, erythematous, cutaneous elevations that blanch with pressure, indicating the presence of dilated blood vessels and edema. Histology of acute urticarial lesions reveals dilation of small venules and capillaries located in the superficial dermis with widening of the dermal papillae, flattening of the rete pegs, and swelling of collagen fibers. Urticaria is quite common in general population and the estimated incidence is about 15% to 25%. Acute urticaria is defined as less than 6 weeks' duration and more likely to identify specific cause, while the cause of chronic urticaria is determined in less than 20% of cases. The cause of acute urticarial is often associated with drug, food, or other allergy. There are four main mechanisms for urticaria, including (1) immune-mediated, (2) complement-mediated, (3) non-immune-mediated, and (4) autoimmune-mediated, and medication-associated urticaria is involved almost all mechanisms.

Drug hypersensitivity is a type B reaction of adverse drug reaction (ADR); and immune-mediated drug reactions constitute 6–10% of all ADRs. The most common drug groups causing hypersensitivity reactions are β -lactam antibiotics, and non-steroidal antiinflammatory drugs (NSAIDs). The most common presentations of drug hypersensitivity are urticaria. The mechanism of drug hypersensitivity attributes to recognition of drugs by immune system. Drug antigens presented to the immune system in multivalent form will elicit a specific immune response (sensitization) and activate immunopathologic mechanisms (effector functions). Drug immunogenicity and factors of genetic and metabolic background also make an influence on host for drug hypersensitivity. The key elements for diagnosis of drug allergy are careful assembly of the chronology of all relevant events and knowledge of the relative sensitizing potential of various candidates. Predictive skin testing for acute allergic drug reactions is available only for macromolecules and a few haptenic drugs, mostly notably β -lactam antibiotics. Using provocational testing and desensitization when indicated, almost all drug-sensitive patients can receive drugs associated with prior reactions, except for patients with severe exfoliative dermatoses and immune-mediated dermatitis.

To summary, drug hypersensitivity states present an often frustrating challenge for most practicing physicians. Immunodiagnostic tests for drug allergy are usually

limited in number and require some sophistication to interpret. Meticulous exploration of history and possible etiology is still the mainstay approaching diagnosis.