LEVOFLOXACIN ORAL CHALLENGE TEST

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INTRODUCTION

Drug allergy is one type of adverse reaction to drugs and encompasses a spectrum of hypersensitivity reactions with heterogeneous mechanisms and clinical presentations. It has been defined by the British Society for Allergy and Clinical Immunology (BSACI) as 'an ADR with an established immunological mechanism'^{1,2}. Diagnostic procedures in allergy diagnosis can be classified into the patient's history, in vivo skin testing, in vitro laboratory tests and provocation tests³. In situations in which there is a definite medical need for a particular agent, no suitable alternative agent exists, there are primarily two options for the patient with a drug allergy; a procedure to induce temporary drug tolerance can be performed to allow the patient to take the drug safely or a test dose or graded challenge can be administered to determine whether the patient is currently allergic to the particular drug⁴.

METHODS

In order to test for the sensitivity of a patient to levofloxacin, we have developed a protocol wherein the patient is tested for allergy to a particular drug in a series of three procedures one by one.

Firstly, the patient is subjected to skin prick test for levofloxacin. The drug concentration of 5mg/ml is used for the prick test. A wheal of diameter > 3mm is considered

positive. If the results of this patient are negative, we proceeded to intradermal testing.

For intradermal testing, the drug concentration used is 0.05mg/ml. >3mm increase in previous bleb size and erythema is considered positive. If the intra dermal test is also negative, we then proceeded to oral challenge test.

The oral challenge test is necessarily carried out in collaboration with Dept. of anesthesiology & critical care in intensive care unit (ICU) settings. The patient is given an oral dose of 50 mg and closely monitored for 30 minutes. If the patient does not develop any reaction after 30 minutes, he will be given an oral dose of 125 mg and monitored for 30 minutes. The patient is monitored very closely. If the patient is still asymptomatic to allergic reaction, we proceed with the next dose of 250 mg and the patient monitored for 30 minutes. After 30 minutes, patient is given the last oral dose (500mg) and observed for 45 minutes.

If the whole procedure remains uneventful and the patient remains stable, the use of levofloxacin in the patient can be recommended.

CONCLUSION

The Oral Challenge Test has been standardized for the first time in this institute (SKIMS) although drug allergy testing is a routine diagnostic procedure in our dept. Referral of patients to a specialist drug allergy clinic can thus be suggested if drug desensitization could benefit the management of the patient. Apart from antibiotics, desensitization can be important for drugs, such as certain chemotherapeutic agents or desensitization to aspirin in patients requiring aspirin thrombo-prophylaxis.

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