

Summaries for Patients are a service provided by *Annals* to help patients better understand the complicated and often mystifying language of modern medicine.

The full report is titled “Brief Communication: Tolerability of Meropenem in Patients with IgE-Mediated Hypersensitivity to Penicillins.” It is in the 20 February 2007 issue of *Annals of Internal Medicine* (volume 146, pages 266-269). The authors are A. Romano, M. Viola, R.-M. Guéant-Rodriguez, F. Gaeta, R. Valluzzi, and J.-L. Guéant.

Tolerability of Meropenem in Patients with Penicillin Allergy

What is the problem and what is known about it so far?

Allergic reactions to the antibiotic penicillin are common. Meropenem is an antibiotic that fights many of the same infections as penicillin. Meropenem may be an option for patients who are allergic to penicillin. However, meropenem and penicillins have similar chemical structures; therefore, doctors often avoid using meropenem in patients who are allergic to penicillin. Information about the frequency of meropenem allergy in patients with penicillin allergy is limited. With some drugs, such as penicillin and meropenem, doctors can perform a “skin test” for allergic reactions by administering small amounts of the drug under the skin. It is important to know about antibiotic options for patients who cannot take penicillin because of allergy.

Why did the researchers do this particular study?

To learn about the frequency of meropenem allergy in patients with penicillin allergy.

Who was studied?

104 patients with a previous allergic reaction to penicillin and positive results on skin tests for penicillin allergy. These patients agreed to participate for research purposes only and did not actually have conditions that might require meropenem treatment.

How was the study done?

The researchers administered skin tests with meropenem to all 104 patients. They then offered a meropenem challenge test to patients with negative skin test results. In the challenge tests, the researchers gave patients with negative skin test results for meropenem allergy a small dose of meropenem. They carefully observed patients for an allergic reaction. If no reaction occurred, they gave the patient 2 increasingly higher doses, carefully watching for an allergic reaction after each dose.

What did the researchers find?

Of the 104 patients tested, only 1 had a positive skin test result for meropenem allergy. The remaining 103 patients tolerated the meropenem challenges without an allergic reaction.

What were the limitations of the study?

Challenge tests were not followed by full treatment doses because the patients did not have infections that required antibiotic treatment. Some patients who had no reaction to a challenge dose could have an allergic reaction to a full dose.

What are the implications of the study?

Meropenem seems to be a treatment option for patients with penicillin allergy who have negative meropenem skin test results.