

Antiseizure medications can produce lifethreatening reactions

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Molecular tests and other screening tools can lessen the risk of potentially fatal reactions to antiseizure medications that millions of Americans take for epilepsy and other conditions, but skin rashes still



require speedy medical attention, according to research from Rutgers Health.

Rashes are a common side effect of antiseizure medications, occurring in 2 percent to 16 percent of patients, depending on which of 26 Food and Drug Administration-approved medications they use.

Although most rashes indicate nothing serious, roughly 5 percent indicate life-threatening reactions. The FDA recently issued a warning about serious reactions to two antiseizure medications: levetiracetam and clobazam.

"Dangerous reactions are rare, but patients and caregivers should still understand the risk and how to respond if things happen," said Ram Mani, chief of the adult epilepsy division at Rutgers Robert Wood Johnson Medical School and lead author of the study published in *Current Treatment Options in Neurology*.

"Patients should seek <u>medical treatment</u> if rashes develop rather than waiting for them to disappear," Mani said. "If symptoms are mild, they can contact their neurologist or primary care physician, but serious symptoms like a <u>high fever</u> warrant a trip to the <u>emergency room</u> or a 911 call."

The proper antiseizure medication can eliminate epilepsy symptoms in 70 percent of patients and ease them in most others. Such medications also help many patients with bipolar disorder, anxiety, migraines and neuropathic pain.

The new study synthesizes published data on individual antiseizure medication, distinguishes the different rashes such medications can trigger and explains how to treat each one.



Factors that increase the risk of severe reactions include the use of aromatic antiseizure medications, rapid dose escalation, genetic predisposition to reaction and the simultaneous use of other medicines that affect drug metabolism. Women less than age 50 and boys under 10 also experience more frequent reactions, as do people with diseases such as HIV or lupus or those undergoing treatments such as radiation therapy that increase or decrease immune activity.

"Patients who react to one medication are more likely to react to others, particularly others in the same drug class, but with 26 FDA-approved options, we can typically find each patient an effective treatment with minimal side effects," Mani said.

Antiseizure medications can trigger at least 10 distinct rash types. Reactions such as a fixed drug eruption—which is characterized by a small number of bumps—can begin within hours of the first injection, while other skin rashes, such as lichenoid drug reactions, can occur after the patient has been using a medication for years.

The most common reaction, by far, is called morbilliform exanthematous eruptions. These typically occur in the first two weeks of treatment onset and blanket the torso (and often the limbs) with small bumps. Symptoms usually disappear without treatment a few weeks after patients discontinue whatever medication provokes them but can worsen for several days before they start improving.

Severe conditions, on the other hand, often require urgent treatment. The reaction known as Stevens-Johnson syndrome or toxic epidermal necrolysis—which produces fever, eye pain and detached skin—typically requires that victims receive inpatient care at a hospital burn unit.

Mani estimated that several thousand patients suffer severe reactions to



antiseizure medications each year but added that numbers could decrease significantly if neurologists consistently put high-risk patients on low-risk medicines.

"I gave a talk on this topic at the American Epilepsy Society Conference last year, and I asked the 200 or so doctors in the room how frequently they perform the recommended [genetic] tests on patients of South Asian ancestry [the only group prone to the relevant genes] and only a handful raised their hands," Rami said. "So there's definitely room for improvement to increase patient safety."

More information: Ram Mani et al, Distinguishing Benign Rashes From Severe Skin Reactions From Anti-Seizure Medications, *Current Treatment Options in Neurology* (2024). DOI: 10.1007/s11940-024-00785-8

Provided by Rutgers University

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