

Ice pops interfered with hospital patient's lab tests: report

July 3 2013, by Randy Dotinga, Healthday Reporter



Food additive might have led to false positive results for fungal infection.

(HealthDay)—Physicians should be aware that frozen ice pops—a common treat in hospitals—can fool tests designed to detect a fungal infection that threatens people with an weakened immune system, researchers report.

In France, a stem cell-transplant recipient was wrongly treated for the infection because of false positive test results. Later, researchers tested three brands of ice pops and found they all contain a molecule known as galactomannan that can trigger a false test reading.

The report "highlights the issues surrounding the test and the need for more specific tests," said Malcolm Richardson, director of the Mycology

Reference Center in Manchester, England, and a specialist in [fungal diseases](#). "Clinicians who use this test to make [treatment decisions](#) and to guide therapy should be aware of all of its limitations," added Richardson, who was not involved in the research.

The fungus, known as aspergillus, is so common that most people breathe in its spores each day, according to the U.S. National Institutes of Health. It's found in soil, on plants, in household dust and in some home-building materials.

Most people have no problems when they encounter the fungus because their immune systems get rid of it. But that may be impossible for people with [weakened immune systems](#) caused by diseases such as AIDS or by chemotherapy. These people, including those who have had [organ transplants](#), are vulnerable to infection with an aspergillus-caused disease called invasive aspergillosis that can lead to serious respiratory illness.

The new report, published as a letter in the July 4 issue of the *New England Journal of Medicine*, describes the case of a 42-year-old woman who underwent a stem-cell transplant to treat a bone marrow disorder. Tests suggested she'd been infected by the [aspergillus fungus](#), although she didn't show symptoms, and she began taking an [antifungal drug](#) called [voriconazole](#) to treat it.

The tests were wrong. The woman was not actually infected with the fungus. She later died of a viral infection and her body's overly aggressive response to the stem-cell transplant.

Researchers thought ice pops might be a factor since she was eating three or four a day while otherwise fasting. They tested 37 ice pops from three brands—Mr. Freeze, Disney and Yetigel. All had high levels of galactomannan, a molecule whose presence in the body is a possible sign that the patient has an aspergillus infection.

The researchers couldn't find extensive information about the manufacturing process, but they suspect the molecule might have entered the ice pops in food additives or sodium gluconate, which is used to thicken and stabilize water-based frozen desserts.

Other foods and food products that can contain the fungus include fruit, black pepper, tea bags and loose tea, said Richardson, the fungal disease specialist. Many U.S. and European hospitals don't allow high-risk patients to eat these foods, he said. They also forbid foods such as cereal, pasta and rice that contain galactomannan because of the potential for false-positive test results for [fungal infection](#).

What's the harm if a test wrongly says a patient is infected by the fungus? The problem is the treatment, said Dr. David Denning, director of the National Aspergillosis Center in Manchester, who was not involved in the report. "It is unnecessary therapy, with some significant side effects, drug interactions—upsetting other drugs which can have other adverse consequences— and large additional cost," Denning explained.

On the other hand, "the downside of missing invasive aspergillosis is almost always death," he added.

One message of the new report, Richardson said, is that physicians should be cautious if a test shows that a patient has the fungal infection without symptoms. In that case, he said, they should "explore all the possible causes of positive galactomannan results."

More information: For details about [aspergillosis](#), visit the U.S. National Library of Medicine.

Citation: Ice pops interfered with hospital patient's lab tests: report (2013, July 3) retrieved 5 February 2023 from <https://medicalxpress.com/news/2013-07-ice-interfered-hospital-patient-lab.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.