Cases of drug-resistant fungal ringworm spotted in New York City

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The first U.S. cases of drug-resistant ringworm infection have been

reported in New York City.

The cases of two women with highly contagious skin infections caused by *Trichophyton indotineae* are reported in the May 12 issue of the U.S. Centers for Disease Control and Prevention's *Morbidity and Mortality Weekly Report* . The fungus causes widespread, very itchy, and very hard-to-treat tinea infections. (Tinea is also known as ringworm, which can be misleading since no actual worm is involved.)

"These are the first reported cases in the United States, but the infection is now spanning the globe," said researcher Dr. Avrom Caplan, a dermatologist at NYU Langone Medical Center in New York City. It has been spreading widely in India over the last decade and was termed "indotineae" in a report of two 2020 cases, he noted.

"The name should not imply that it is only in India," Caplan said. "We may see more of this infection over time."

The infection can be transmitted by direct contact; by contact with particles of dead skin, nails and hair shed by the host, usually animals and pets; or by contact with fungal spores. The infection is easily spread from person to person.

Caplan said doctors should be aware of this infection and that topical antifungal creams aren't going to be enough to treat it.

"We also know that this infection is hard to confirm with diagnostic testing," he said. "It takes analysis at specialized labs to confirm this particular infection, so clinical awareness and suspicion is very important."

Treatment often requires longer courses of oral antifungals than doctors typically think about, Caplan said.

It appears that one of the patients in the CDC report picked up the infection while traveling outside the United States, he said.

That patient, a 47-year-old woman with no major health issues, developed a bad case of ringworm, also known as tinea, last summer in Bangladesh. She and several family members were treated there with topical antifungal and steroid creams, according to the report.

After returning to the United States, the woman had continued skin eruptions and failed to respond to a common antifungal treatment called terbinafine.

A four-week course of griseofulvin had better results—an 80% improvement in her symptoms—but doctors are still evaluating next steps. Her husband and son have similar symptoms and are being evaluated, the study said.

The other patient in the CDC report, a 28-year-old woman, developed a rash in the summer of 2021. She had not been outside the country, suggesting potential U.S. transmission of the fungus. After treatment with itraconazole, her rash disappeared in four weeks. Doctors are continuing to monitor her, the report said.

"We know this infection is spanning the globe, and we expect we will see more here," Caplan said. Outside Asia, cases have been identified in Europe and Canada, according to NBC News.

"It is hard to confirm diagnostically, but suspicion can be raised clinically if patients present with widespread, itchy, inflamed scaly plaques over the face, neck, trunk or groin," Caplan said.

Patients may report the use of topical corticosteroids or combination creams with topical antibiotics. They may or may not report traveling,

Caplan said.

"Given the ease of transmission between people though, it's highly likely that we will see at least family spread if not other local spread," he said.

This infection is hard to treat, Caplan stressed.

Oral antifungals for eight to 12 weeks or more are usually required. Typically, the treatment of choice is itraconazole, which in the past was not usually a first-line oral antifungal. Even afterward, patients may relapse.

Caplan urged doctors to be on watch for patients with widespread, very itchy, scaly and red plaques that look like tinea. They should be asked about travel history, exposures to anyone with similar rashes, and about their use of topical creams, especially corticosteroids, he said.

So far the fungus doesn't seem to be a widespread problem in the United States, he added.

"Public health officials are monitoring the situation closely, and we want to catch cases early to prevent spread," Caplan said. "And we want to emphasize the importance that people should seek a diagnosis from a health care provider if they are concerned about widespread tinea infections."

Dr. Marc Siegel, a clinical professor of medicine at NYU Langone Medical Center, who was not involved in the study, said that these cases, though isolated, have alerted the CDC to a growing problem with fungi that are resistant to common remedies.

Part of the problem comes from misuse and overuse of antifungals, he said.

"This is a growing problem not just with tinea but with other fungi as well including Candida auris," Siegel said.

A second expert, Dr. Raman Madan, a dermatologist at Northwell Health in Huntington, N.Y., said he isn't too worried about this infection.

"A few isolated cases that they found in New York isn't very concerning to me," he said. "I think it becomes more of a problem if a year from now we start seeing more and more of these. It's something that should be on dermatologists' radar but I wouldn't be too concerned as a patient right now."

More information: For more on *Trichophyton indotineae*, visit the U.S. Centers for Disease Control and Prevention.

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