‘Medical Marijuana’ Riddled with Mold, Bacteria — Especially Bad for the Sick?

By Jamie Wells, M.D. — February 10, 2017

With the current wave of states legalizing marijuana, advocates championing the cause and the presence of greater societal acceptance, there is a growing perception that dispensary-supplied "medical marijuana"—not distinct from "recreational marijuana"—is as safe as any medical product obtained at a pharmacy. This is not so as there are no quality control measures or thorough federally-regulated vetting procedures in place to ensure safety.

It seems the medical and health research aspects of the issue are many steps behind the legal and political advances contributing to a false sense of security. The reality is much is not known about the science—good, bad or indifferent. Partly to blame is public universities’ very restricted ability to study the substance in the first place.

Though medical marijuana is marketed to ease suffering which is always a noble endeavor, efforts to investigate potentially harmful contaminants have not gotten substantially underway. Hence, why a research team from UC Davis embarked on a journey to explore further, concerned over the possible lethal risks infectious agents could cause when directly inhaled into the lungs of patients—in particular the most vulnerable (e.g. those with cancer, AIDS, organ transplant recipients, uncontrolled diabetes or any condition involving a suppressed or weakened immunity).

With multiple explorations in the works, their recent findings were accepted for publication in Clinical Microbiology and Infection in a letter entitled “A microbiome assessment of medical marijuana.” The researchers examined twenty samples purchased from Northern California dispensaries for the presence of microorganisms. Testing yielded a wealth of diverse bacteria and fungi known to cause serious infections (especially in the immunocompromised patient), many of
the lungs—among them *Aspergillus, Cryptococcus, Mucor, Klebsiella pneumoniae, E. Coli,* and *Acinetobacter baumannii.* (1)

Patients undergoing cancer therapies or transplants, for example, are often given a laundry list of foods, herbs, environments and so forth to avoid due to an increased risk of contracting dangerous infections. In some instances, they are advised to be certain meals are cooked above a specific temperature given that water, soil and being raw can be introductory sources. There are a number of standard medications thoroughly tested and very effective that are formally used and prescribed by doctors to treat side effects of these often toxic oncologic or other treatments. Some patients alternatively seek out medical marijuana—obtained through dispensaries or other routes depending on the state—in an effort to reduce nausea, chronic pain and serve as an appetite stimulant.

The notion of possible hazards was sparked by a lead author, Joseph Tuscano, MD—a cancer specialist and professor in the Division of Hematology and Oncology at UC Davis—when he had a patient who acquired a rare, incurable fungal infection from aerosolized marijuana. (2) In a statement released by UC Davis Comprehensive Cancer Center, Dr. Tuscano proclaims, “infection with the pathogens we found in medical marijuana could lead to serious illness and even death. Inhaling marijuana in any form provides a direct portal of entry deep into the lungs where infection can easily take hold.”

Since most health professionals and patients likely don’t consider this possibility as the source of infection, other avenues might get falsely attributed. The authors underscore that the heat generated to smoke marijuana is not sufficiently maintained to guarantee safety, so they strongly advise against its use in immunocompromised patients. It is not known if cooking it for baked products is sufficient enough to eliminate the risks posed.

Fortunately, this team is undergoing more work to determine overall significance and future research in general should, hopefully, tease out methods to optimize safety and elucidate utility. Since California appears to be the leader on this front, this paper provides tremendous initial insight as well as more questions. There is a lot more that needs to be done to understand the real risks and benefits of marijuana.

As always, a discussion with your own doctor is optimal and being honest and forthcoming is in your best interest when it comes to your health and well-being.

Sources:

(1) (2) UC Davis study finds mold, bacterial contaminants in medical marijuana samples: Immunocompromised patients warned about dangers of smoking, vaping [3]. *UC Davis Comprehensive Cancer Center, News.* February 7, 2017.
