



FDA warns about increased risk of cancer relapse with long-term use of azithromycin (Zithromax, Zmax) antibiotic after donor stem cell transplant

Safety Announcement

[8-3-2018] The U.S. Food and Drug Administration (FDA) is warning that the antibiotic azithromycin (Zithromax, Zmax) should not be given long-term to prevent a certain inflammatory lung condition in patients with cancers of the blood or lymph nodes who undergo a donor stem cell transplant. Results of a clinical trial¹ found an increased rate of relapse in cancers affecting the blood and lymph nodes, including death, in these patients. We are reviewing additional data and will communicate our conclusions and recommendations when our review is complete.

The serious lung condition for which long-term azithromycin was being studied called bronchiolitis obliterans syndrome is caused by inflammation and scarring in the airways of the lungs, resulting in severe shortness of breath and dry cough. Cancer patients who undergo stem cell transplants from donors are at risk for bronchiolitis obliterans syndrome. The manufacturer of brand name azithromycin is providing a Dear Healthcare Provider letter on this safety issue to health care professionals who care for patients undergoing donor stem cell transplants.

Azithromycin is not approved for preventing bronchiolitis obliterans syndrome. It is an FDA-approved antibiotic used to treat many types of infections affecting the lungs, sinuses, skin, and other parts of the body. The drug has been used for more than 26 years. It is sold under the brand names Zithromax and Zmax and as generics by many different drug companies. It works by stopping the growth of bacteria that can cause infections.

There are no known effective antibiotic treatments for prophylaxis of bronchiolitis obliterans syndrome. **Health care professionals** should not prescribe long-term azithromycin for prophylaxis of bronchiolitis obliterans syndrome to patients who undergo donor stem cell transplants because of the increased potential for cancer relapse and death.

Patients who have had a stem cell transplant should not stop taking azithromycin without first consulting with your health care professional. Doing so could be harmful without

your health care professional's direct supervision. Talk with them if you have any questions or concerns about taking this medicine.

Researchers in France identified this increased risk of cancer relapse and death while conducting a clinical trial investigating the effectiveness of long-term azithromycin to prevent bronchiolitis obliterans syndrome in patients who undergo donor, or allogenic, stem cell transplants for cancers of the blood and lymph nodes. The researchers concluded that the risks of long-term azithromycin exposure after donor stem cell transplantation may exceed the benefits. The trial could not determine why the rates of cancer relapse and death were higher with azithromycin.

The researchers stopped the ALLOZITHRO¹ trial approximately 13 months after the study completed enrollment of 480 patients because an unexpected increase in the rate of both cancer relapses and death was observed in patients taking azithromycin. Cancer relapse was observed in 77 patients (32.9%) with azithromycin treatment compared to 48 patients (20.8%) with placebo, which is an inactive treatment. A total of 95 patients died in the azithromycin treatment group versus 66 patients in the placebo group; thus, the 2-year survival rate was 56.6% in azithromycin-treated patients compared to 70.1% in those receiving a placebo. In the first few months of the trial, the death rate was about equal between those receiving azithromycin and placebo. However, an imbalance occurred subsequently and continued until the 2-year time point when the study was stopped.

To help FDA track safety issues with medicines, we urge health care professionals and patients to report side effects involving azithromycin and other drugs to the FDA MedWatch program, using the information in the “Contact FDA” box at the bottom of the page.

Reference

1. Bergeron A, Chevret S, Granata A, et al. Effect of azithromycin on airflow decline-free survival after allogeneic hematopoietic stem cell transplant: the ALLOZITHRO randomized clinical trial. *JAMA* 2017;318(6):557-566.

Related Information

[Azithromycin \(marketed as Zithromax or Zmax\) Information](#)

[The FDA's Drug Review Process: Ensuring Drugs Are Safe and Effective](#)

[Think It Through: Managing the Benefits and Risks of Medicines](#)