

Common macrolide antibiotics show no increased risk of serious heart arrhythmia or death

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Macrolide antibiotics such as azithromycin, clarithromycin and erythromycin are commonly used to treat respiratory tract infections worldwide, with more than 57 million outpatient prescriptions written in 2010 in the United States.

Previous studies show conflicting evidence as to whether these [antibiotics](#) increase the risk of a serious heart rhythm disturbance (ventricular arrhythmia) and death. Nonetheless, in 2013, the FDA issued a warning about these risks with macrolide antibiotics.

Canadian researchers conducted a matched study of over 600,000 adults aged 65 years or more in Ontario, Canada's largest province. They used data from the Institute for Clinical Evaluative Sciences (ICES) and universal prescription drug coverage data from the Ontario Health Insurance Plan (OHIP). The researchers matched people taking macrolide antibiotics with people of similar age, health status and other characteristics who were taking nonmacrolide antibiotics. Of the total study cohort, 57% were women, and the mean age was 74 years.

"We observed that, compared with nonmacrolide antibiotics, new use of macrolide antibiotics was associated with a similar 30-day risk of [ventricular arrhythmia](#) ... and a slightly lower risk of all-cause mortality," writes Dr. Amit Garg, director of the ICES western facility in London, Ontario, a physician at London Health Sciences Centre and a researcher

at Lawson Health Research Institute.

No higher risk of adverse events with macrolide antibiotics compared to nonmacrolide antibiotics was observed in subsets of patients with congestive heart failure, coronary artery disease and chronic kidney disease.

"In contrast to prior studies, we found that these variables did not significantly alter the association between macrolide antibiotic use and our outcomes. Nonetheless, these findings should be interpreted with caution, and physicians should always consider a patient's baseline risk for adverse events before prescribing macrolides or other antibiotics."

"These findings are reassuring for health care providers who prescribe [macrolide antibiotics](#) to a wide range of patients in routine care," they conclude.

More information: *Canadian Medical Association Journal*,
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