

# The GeriJournal



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## Azithromycin Under the Gun

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One of our favourite antibiotics, Zithromax® (azithromycin) is under pressure on a number of fronts these days. The two main issues confronting it are bacterial resistance and potentially fatal cardiac arrhythmias, particularly in the elderly.

At first glance, azithromycin seems the perfect antibiotic. It is well tolerated, has a remarkably long half-life (up to four days), achieves very high concentrations in phagocytic white blood cells that fight infection and is practically devoid of drug interactions. As a result, once daily administration for only five days has been the standard dosage regimen. Convenience and its broad spectrum activity have led to overuse, and unfortunately, resistance to some respiratory pathogens has developed.

A large analysis of 1.6 million antibiotic prescriptions in U.S. veterans has come out in support of previous studies demonstrating arrhythmic risk.

It showed that azithromycin can extend the electrocardiogram QT interval and trigger fatal torsades de pointes. In this trial nearly 600,000 patients received azithromycin, compared to roughly 1 million taking amoxicillin. The risk of death was 48% higher, and cardiac arrhythmias 77% higher in the first five days in the group treated with azithromycin.

Elderly patients with major cardiac disease or arrhythmias are at particularly high risk for these outcomes. Low serum potassium and magnesium levels, bradycardia or concurrent antiarrhythmic medications also increase the risk. Azithromycin should be used judiciously in the elderly.

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## Pradaxa Monitoring

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Our greatest concerns with the newer anticoagulants are our inability to monitor clotting activity and to reverse a bleed, should it occur. As a result, warfarin, with its bothersome blood draws for INR testing, is still the dominant agent in our facilities today.

Things are beginning to change, however. A monitoring test for dabigatran (Pradaxa®) has been developed recently. It is called the Hemoclot Thrombin Inhibitor assay and it measures the time blood takes for blood containing dabigatran to form a clot in a test tube.

Dabigatran inhibits the action of thrombin, an enzyme which converts fibrinogen to fibrin, the protein that constitutes blood clots. As with the INR and warfarin, a clotting time that is too long correlates with too high a dose of dabigatran. The test allows us to identify residents who may be at risk and should have their dose reduced or be changed to another agent. Availability of the test is limited, but it should be more widely distributed in the near future.

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## Lyrica for Restless Legs

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Restless Legs Syndrome (RLS) is a phenomenon where an individual may suffer from pain, tingling or numbness and often has the urge to move his or her legs while at rest. The RLS prevalence increases with age, affecting up to 10% of seniors and 25% of nursing home residents.

Anti-Parkinsonian drugs are the mainstay of treatment, but they are not always effective or well tolerated. They can even augment (worsen) the condition. A randomized, placebo-controlled trial in *NEJM* compared Lyrica® (pregabalin) to Mirapex® (a common therapy). Lyrica® was more effective and caused less symptom augmentation than Mirapex®, though it was more sedating. This gives us an additional tool to treat RLS affected residents who respond poorly to standard treatment.