



Rx Update

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MOXIFLOXACIN

Moxifloxacin (Avelox[®]) is a synthetic broad-spectrum fluoroquinolone which has better *in vitro* activity against *Streptococcus pneumoniae* compared to ciprofloxacin. It has been added to the UIHC Formulary for the treatment of community-acquired respiratory infections. Levofloxacin has been deleted from Formulary. Ciprofloxacin will remain the primary fluoroquinolone available on the Formulary for the treatment of gram-negative infections (e.g., hospital-acquired pneumonia, urinary tract infections, intra-abdominal infections, bone infections). Ciprofloxacin is more potent *in vitro* for gram-negative organisms, compared to moxifloxacin, and should be used for situations when a fluoroquinolone is needed for gram-negative coverage. The use of moxifloxacin for the treatment of infections usually caused by gram-negative organisms (e.g., urinary tract infections) will likely result in treatment failure.

Moxifloxacin is contraindicated in patients with a fluoroquinolone allergy. It has been shown to prolong the QT interval and should not be used in patients with QT interval prolongation, hypokalemia, or those receiving Class IA (e.g., quinidine, procainamide) or Class III (e.g., amiodarone, sotalol) anti-arrhythmic agents. It should also be used cautiously with other medications that may prolong the QT interval (e.g., cisapride, erythromycin, antipsychotics, tricyclic antidepressants) or in patients with other proarrhythmic conditions. Moxifloxacin should also be used with caution in patients with known or suspected CNS disorders (e.g., severe cerebral arteriosclerosis, epilepsy), or in the presence of other risk factors that may predispose to seizures or lower the seizure threshold.

The most common side effects reported by patients treated with moxifloxacin are nausea (6%), diarrhea (5%), and dizziness (2%). Other rarer side effects of moxifloxacin include tendon rupture, seizures, hypersensitivity reactions, and photosensitivity.

Moxifloxacin is available in both oral and injectable dosage forms. The recommended adult dose of moxifloxacin is 400 mg (PO or IV) once daily for 7 days for community-acquired pneumonia. No dosage adjustment is needed in patients with renal impairment or patients with mild to moderate hepatic insufficiency.

Moxifloxacin tablets can be taken without regard to meals and can be crushed for enteral tube administration. **Oral doses of moxifloxacin should be administered at least 4 hours before or 8 hours after aluminum- or magnesium-containing antacids, sucralfate, or iron- and zinc-containing products** because they can substantially decrease the systemic absorption of moxifloxacin if given concurrently with these agents. Moxifloxacin injection is available as a 400 mg in 250 ml of 0.8% sodium chloride premixed bag. Each dose should be infused over 60 minutes.

Moxifloxacin injection is a protocol antibiotic at UIHC with its use restricted to the treatment of community-acquired pneumonia (within 2 days of hospital admission) and when oral therapy is not appropriate. A protocol form (Form 671) needs to be completed by the prescriber in order for a patient to receive moxifloxacin injection. Moxifloxacin tablets have no restriction.