Fluoroquinolone Criteria for Use

VHA Pharmacy Benefits Management Strategic Healthcare Group and the Medical Advisory Panel

The following recommendations are dynamic and will be revised, as new clinical data become available. These criteria are not intended to interfere with clinical judgment. Rather, they are intended to assist practitioners in providing cost effective, consistent, high quality care.

Patient Selection: Please note that this document discusses the most common indications for fluoroquinolone use. It is not intended to be a comprehensive list of all appropriate uses of fluoroquinolones.

Urinary tract infections:

Due to antimicrobial resistance, in many medical centers fluoroquinolones are the antimicrobial of choice for empiric treatment of urinary tract infections. For this indication, based on safety, efficacy and price ciprofloxacin is the fluoroquinolone of choice.

Community-acquired pneumonia:

Hospitalized patients**:** First line therapy is generally with the combined use of a macrolide and a beta-lactam agent active against penicillin-resistant *Streptococcus pneumoniae* (e.g., cefotaxime or ceftriaxone). Fluoroquinolones should generally be considered second line agents for treatment of beta-lactam allergic patients.

Outpatients: Use of fluoroquinolones requires radiological evidence of pneumonia and should be consistent with guidelines.[4]

Other upper and lower respiratory tract infections:

Fluoroquinolones are generally second or third line agents based on the likely or proven susceptibility of known or probable infectious agents.[5-7]

Safety concerns with fluroquinolone therapy involve the use of these agents in specific populations.

- **Patients with a history of long QT syndrome, hypokalemia or who are receiving Class Ia or class III antiarrhythmic agents** (quinidine, disopyramide, procainamide, sotalol, amiodarone, dofetilide, ibutilide) are predisposed to development of Torsades de Pointes or other cardiac arrhythmias. These arrhythmias have been reported with levofloxacin, and moxifloxacin. These fluoroquinolones should be avoided in this patient population.
- **Disturbances of blood glucose**, including symptomatic hypoglycemia and hyperglycemia, have been reported with all fluoroquinolones. The risk of dysglycemia is greatest in diabetic patients. However, hypoglycemia and particularly hyperglycemia have occurred in patients without a history of diabetes.[7-11]
  Other risk factors associated with dysglycemia while taking fluroquinolones include older age (i.e., patients ≥ 65 years of age, renal insufficiency (i.e., estimated creatinine clearances ≤60 ml/min and concomitant glucose-altering medications (particularly hypoglycemic medications).
  Moxifloxacin is not renally excreted and therefore is not effective for treatment of urinary tract infections. No dose adjustment is required for renal impairment.

References

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