

# The Medical Letter®

## On Drugs and Therapeutics

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### IN BRIEF

#### Fluoroquinolones and Tendon Injuries

The FDA has added a boxed warning to fluoroquinolone package inserts about tendon injuries that may occur as a result of their use. Tendinitis or tendon rupture may occur rarely with systemic use of any fluoroquinolone, either while the drug is being taken or for up to several months afterwards.

**Table 1. Fluoroquinolone Antimicrobials**

Ciprofloxacin ( <i>Cipro</i> , and others)
Gemifloxacin ( <i>Factive</i> )
Levofloxacin ( <i>Levaquin</i> )
Moxifloxacin ( <i>Avelox</i> )
Norfloxacin ( <i>Noroxin</i> )
Ofloxacin ( <i>Floxin</i> , and others)

Fluoroquinolone-related tendon injury is rare; estimates for its incidence in the general population range from 0.14% to 0.4%. The risk is higher for patients >60 years old and for those taking corticosteroids. For patients with organ transplants, the incidence may be as high as 15%.<sup>1</sup> A case-control study in Italy involving 22,194 cases of non-traumatic tendinitis and 104,906 controls found that fluoroquinolone use was significantly associated with tendon disorders in general (OR 1.7; 95% CI 1.4-2.0), tendon rupture (OR 1.3; 95% CI 1.0-1.8), and Achilles tendon rupture (OR 4.1; 95% CI 1.8-9.6). Achilles tendon rupture occurred with fluoroquinolone treatment in one of every 5989 patients in general and in one of every 1638 patients >60 years old.<sup>2</sup>

Widespread use of fluoroquinolones, particularly for treatment of respiratory infections, has produced substantial bacterial resistance to this class of drugs and has been associated with an increase in the incidence and severity of *Clostridium difficile* disease.<sup>3</sup> Even when bacterial pneumonia is considered a likely possibility, other drugs are generally preferred, at least in non-elderly, otherwise healthy patients.<sup>4</sup>

1. F Muzi et al. Fluoroquinolones-induced tendinitis and tendon rupture in kidney transplant recipients: 2 cases and a review of the literature. *Transplant Proc* 2007; 39:1673.
2. G Corrao et al. Evidence of tendinitis provoked by fluoroquinolone treatment: a case-control study. *Drug Saf* 2006; 29:889.

3. Treatment of *Clostridium difficile*-associated disease (CDAD). *Med Lett Drugs Ther* 2006; 48:89.
4. Drugs for community-acquired bacterial pneumonia. *Med Lett Drugs Ther* 2007; 49:62.

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