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Fluorquinolones and the risk of Achilles tendon disorders: update on a neglected complication

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ABSTRACT

Introduction: Achilles FQ-associated tendinopathy was first reported by Bailey et al. in 1983. Since then, nearly 200 case reports related to FQ-associated tendon injury have been published, as well as some case control and cohort studies. Today, drug-induced tendinopathy is accepted as a class effect of FQ. The Achilles tendon is affected in 90% of cases of FQ-related tendinopathy and rupture.

Objective: To evaluate current evidence for the association between fluoroquinolones and Achilles tendinopathy and to identify associated risk factors that increase the incidence of this complication.

Methods: We conducted a computerized search of the relevant scientific literature from 1988 to 2018 using electronic databases, including PubMed, Medline and Scopus. The search terms were fluoroquinolone-related tendinopathy. Eligible studies were any available reports of fluoroquinolone-related tendinopathy (tendinitis, tendon pain, or rupture); animal and human histologic studies were included. Data collected included any cases of fluoroquinolone-related tendinopathy, the particular tendon affected, type of FQ, dosage, and concomitant risk factors.

Results: The references selected were reviewed by all authors and judged based on their contribution to the body of knowledge on this topic. The conduct and validity of any clinical studies were carefully considered, and the outcomes of management protocols were carefully scrutinized. Case reports mentioning a specific association with the condition that were thought to be relevant to the discussion were included. Only papers that made a significant contribution to understanding of this condition were included in the review. Thus, a total of 560 abstracts were screened, 79 of which were directly related to FQ-associated Achilles tendinopathy or tendon rupture.

Conclusion: The association between the use of fluoroquinolone antibiotics and Achilles tendon disorders is well-established in the medical literature. We found that male gender, advanced age, normal BMI, chronic renal failure and concurrent use of corticosteroids increases the risk of Achilles tendon pathology. Caution should be exercised during the utilization of this antibiotic class in patients with these characteristics.

Keywords: Fluorquinolones; Achilles tendon, Tendinopathy.

