Chapter 5

Fluoroquinolone Toxicity Syndrome in Other Areas of the Body

C. Diff. Acute Pseudomembranous Colitis

The human intestines contain trillions of friendly bacteria that in a mutualistic fashion perform many helpful functions for their human hosts. Located in the intestines, these flora are comprised of many different species. Some people’s colons have a minor member of intestinal flora, a bacterium known as Clostridium difficile, or C. diff.

Competition from other bacteria usually keep C. diff under control. Yet, antibiotics are designed to kill bacteria, and although they are meant to kill a bacterial infection somewhere in the human body, many times they also can kill off large numbers of the natural bacteria lining the human intestines. The result is often mild diarrhea. This is why people receiving antibiotics also take probiotics, healthy bacteria for replenishing the natural bacterial flora of the colon.

However, in some cases, the antibiotic destroys huge numbers of friendly bacteria. The intestinal system can become overrun with C. diff that may then cause severe intestinal problems for months or years. Symptoms of C. diff overgrowth can range from mild to severe diarrhea to death. C. diff overgrowth kills 14,000 people a year in the United States.1

Antibiotics are the leading cause of C. diff, and the antibiotics most likely to cause C. diff are FQs and one other, clindamycin. C. diff epidemics have been reported in many countries. Because of the high risk of C. diff with FQs and with clindamycin, the European Center for Disease Prevention has recommended that the use of these drugs be avoided in everyday medical practice except for life-threatening conditions. Treating C. diff superinfections can be difficult. Symptoms can include chronic diarrhea, malaise, weakness, lethargy, abdominal pain, low-grade fever, dehydration, and a distinctive foul stool odor. Successful treatment can take months.

“The most effective method for preventing C. Diff overgrowth is proper antimicrobial [antibiotic] prescribing,” states one article on this problem. Brief, mild occurrences of C. diff may not require treatment. Many people take probiotics to recolonize the gut flora, although studies on their benefits are mixed. The antibiotics metronidazole (Flagyl) or vancomycin may be necessary to resolve the condition, but these drugs can have many side effects too. Even with these treatments recurrence of C. diff is about 20 percent. In severe cases of colitis from C. diff
overgrowth, surgical removal of the colon may be necessary. That’s how serious this disorder can be.

Other types of overgrowths can occur with FQs. Candida overgrowths can occur in the mouth, intestines, or vaginal area. Although these overgrowth reactions are serious, patients are rarely warned about them.

**Cardiac Arrhythmias**

“Experiments in animals have shown that ciprofloxacin has the potential to induce cardiotoxic effect,” a 2012 study reported. This was known by the 1990s. By the early 2000s, it was established that serious cardiac effects from FQs, although rare, also occur in humans.

These cardiac changes involve serious alterations in the heart rhythm, known as prolongation of the QT interval, visible on an electrocardiogram. The slowing of this segment of heart activity can cause lightheadedness or outright fainting, which can lead to accidents such as head injuries. An even more severe cardiac irregularity known as torsade de pointes (translated as “twisting of the points,” named for its unique appearance on the electrocardiogram) can lead to a fatal heart arrhythmia.

Because of the seriousness of these cardiac changes, the FDA has required this warning on all FQ information in package inserts and the PDR:

Serious heart rhythm changes (QT prolongation and torsades de points): Tell your healthcare provider right away if you have a change in your heartbeat [fast or irregular] or if you faint. Cipro may cause a rare heart problem known as prolongation of the QT interval [on an electrocardiogram]. This condition can cause an abnormal heartbeat and can be very dangerous. Occurs especially in the elderly, those with a family history of QT interval prolongation, people with low blood potassium, or those who take anti-arrhythmic medicines.

These cardiac abnormalities from medications are rare. A study by the World Health Organization determined that between 1983 and 1999, 761 cases of QT prolongation were reported. So too were thirty-four deaths from torsade de pointes.

There are only a few medications that are high risk for causing QT prolongation or torsade de pointes. In the early 1990s, the antihistamine Seldane, the first nonsedating antihistamine and the best-selling antihistamine in the world, was withdrawn due to a score of reports of fainting and death due to these cardiac effects. Today, these drug-induced arrhythmias are rare because of better screening in early research. Among current medications, FQs are far
down the list of medications causing these problems. FQs do not even top the list of antibiotics known to cause QT prolongation. The rate of this problem with Cipro is about one per million. Nevertheless, you should inform your doctor right away if your heart starts pounding, skipping, or racing, or if you have a history of heart arrhythmias.

Psychiatric Disorders

In a nutshell, I had a horrific reaction to the antibiotic Cipro three months ago and continue to experience debilitating insomnia, anxiety and now depression. I have always been averse to taking any prescription medications but took the Cipro because I had a kidney infection. I reacted to the first dose but kept taking it because I was advised to complete the course. My reaction was “fight or flight” all day and all night. No sleep at all, uncontrollable anxiety, unable to eat, and a change of personality. My heart rate was 165 per minute, more than double my usual heart rate. I have been given many medications to control the symptoms without much improvement, and am fearful of becoming dependent on the Valium I am being prescribed. I am in bad shape. I am a practicing attorney but have been disabled by this. I simply cannot function. CB, 2013

FQs can trigger a wide range of psychiatric symptoms from moderate to severe. Severe reactions include psychosis, hallucinations, delusions, acute manic episodes, or severe depression —conditions so severe that they sometimes require psychiatric hospitalization. With treatment, these reactions can resolve, but not always.

Compared to psychosis or mania, the anxiety disorders caused by FQs may seem mild, but they aren’t. Anxiety is mental pain. Chronic anxiety is as unpleasant and distracting as a continual bad headache. Panic attacks are terrible experiences in which people are flooded with fears of a heart attack, inability to breathe, insanity, or death, or panic about all of them at the same time. Panic attacks are the sudden unleashing of a full-tilt fight or flight reaction, sheer terror, and the overpowering instinct to flee. Repeated panic attacks not only feel awful, but can also affect people’s ability to venture out, go to work, or otherwise carry on a normal life.

Understandably, anxiety disorders caused by FQs not only greatly impair quality of life, but can cause substantial interference with work or social functioning. FQ-triggered depression can be equally serious.

Many FTS sufferers complain of “brain fog,” in which their thinking and memory feel fuzzy and sluggish. Concentration is impacted, and work performance may be impaired as well. In some FTS sufferers, brain fog has lasted months or years.

The pharmacovigilance system in France reported 590 cases of psychiatric reactions to fluoroquinolones over a seventeen-year span. The most frequently reported problems were confusion, hallucinations, agitation, delusions, insomnia, and somnolence, and 102 of these
people required hospitalization. Fortunately, 80 percent of these people responded favorably to treatment. It is not clear whether these 80 percent returned to their pre-FTS levels of functioning, but 20 percent of cases required prolonged psychiatric hospitalization.

**PTSD**

You don’t have to go to Iraq or Afghanistan to experience PTSD (post-traumatic stress disorder). PTSD can occur in people exposed to traumatic events of many types. Rape is one example because it alters a person’s life and sense of safety for months or years. PTSD is made all the worse by repetitive persistent thoughts and flashbacks that are difficult to erase from the mind.

Official information on FQs doesn’t mention PTSD, yet it certainly occurs with severe or prolonged fluoroquinolone toxicity syndrome. In my consultations many people with severe FTS have PTSD and shock over how suddenly their lives have changed and they have become disabled, in pain, unable to sleep, and filled with fears of never recovering and getting their lives back. Thus, it is no surprise that the FDA also lists “suicidal thoughts” as an adverse effect with FQs.

People young or old, living a normal life, do not expect to experience sudden severe pain, tendon ruptures, neurological changes, acute panic symptoms, etc., from a simple antibiotic. Nor can they believe that they were prescribed a toxic drug without any warning, especially for a minor infection. Had they been warned, many would have declined treatment with a FQ. Their sense of betrayal by the medical system compounds their distress. And not to forget, some of these stricken people have been said to have committed suicide, sometimes by pills, sometimes but intentional car crashes, and sometimes by other means.

**Sunlight Photosensitivity Syndrome**

Many types of drugs including FQs can cause photosensitivity, an oversensitivity and reactivity to sunlight. The result can be severe redness, skin burns, and raised vesicles on the skin. While taking a FQ or any other drugs that can cause photosensitivity, you should minimize prolonged exposure to natural sunlight and use protective clothing and sunblock. Also avoid the intense artificial sunlight exposure that can occur in tanning salons.

Many other side effects can occur with FQs. You can view them by searching online for the product information for Cipro, Levaquin, Avelox, or the other FQs. Or you can request the package insert for any of these drugs from your pharmacy. Look under the sections for
Contraindications, Warnings, Precautions, and Adverse Reactions. Also read the Information for Patients sections. Remember, this information is not a complete list of possible problems with FQs. Rare adverse effects may never get reported or listed.