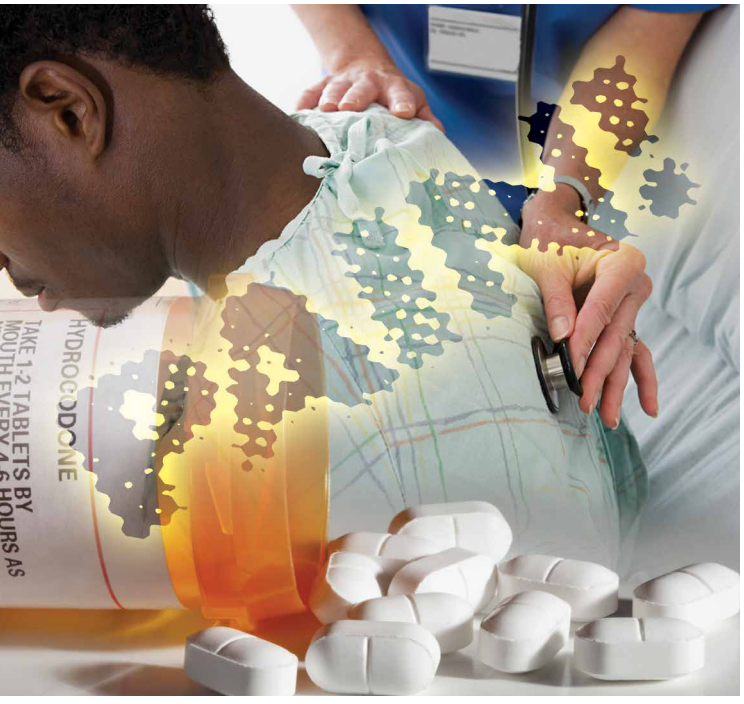
Black Patients Are Less Likely to Receive Opioids for Back Pain, Abdominal Pain, But Not for "Definitive" Pain

BY JEFF BAUER
FROM *PLOS ONE*



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Black patients who present to the ED with back pain or abdominal pain are significantly less likely to be treated with or prescribed an opioid than are white patients who report similar pain, according to an analysis of data on national ED visits. However, there were no differences in opioid use among black patients and white patients for more objective pain conditions, such as kidney stones or long bone fractures.

Researchers evaluated National Hospital Ambulatory Medical Care Survey data that included descriptions of ED visits made by adults ages 18 to 65 years from 2007 to 2011. They looked specifically at pain-related visits, and defined the reason for each visit as being a "nondefinitive condition" (toothache, back pain, or abdominal pain) or a "definitive condition" (long bone fractures or kidney stones). These nondefinitive conditions have been associated with drug-seeking behavior.

The subjects were categorized as non-Hispanic white, non-Hispanic black, Hispanic, or non-Hispanic other. Pain was rated on a scale from 0 (no pain) to 10 (severe). Researchers also measured whether the patients received an opioid while they were in the ED, were discharged with a prescription for an opioid, or both.

During the study period, there were approximately 36.5 million ED visits for abdominal pain, 14.3 visits for back pain, 6.9 million visits for toothache, 3.4 million visits for kidney stones, and 2.1 million visits for long bone fractures. For each of these conditions, most visits were associated with severe pain.

After adjusting for pain severity, non-Hispanic black patients with abdominal pain or back pain were significantly less likely than their white counterparts to be administered an opioid while in the ED or to be discharged with a prescription for an opioid. However, there was no significant difference between these groups in opioid administration or prescription for patients with long bone fractures, kidney stones, or toothache. Researchers suggested that although toothache was considered a nondefinitive condition in this study, physicians might have been able to verify dental disease during examination of the mouth, thus limiting the subjectivity in their decision to prescribe an opioid.

1. Singhal A, Tien YY, Hsia RY. Racial-ethnic disparities in opioid prescriptions at emergency department visits for conditions commonly associated with prescription drug abuse. *PLoS One*. 2016;11(8):e0159224. doi: 10.1371/journal.pone.0159224.

FDA Updates Warning Label for Systemic Fluoroquinolones

BY DEEPAK CHITNIS
FRONTLINE MEDICAL NEWS

The Food and Drug Administration (FDA) has amended the boxed warning on labels for fluoroquinolone antibiotics, taken either orally or by injection, to reflect recent findings of the drugs' potential adverse events.

"These medicines are associated with disabling and potentially permanent side effects of the tendons, muscles, joints, nerves, and central nervous system that can occur together in

the same patient," the FDA stated in its Safety Announcement.

As a result, health care providers should reserve systemic fluoroquinolones for patients who have no other treatment options for any of the following conditions: acute bacterial sinusitis (ABS), acute bacterial exacerbation of chronic bronchitis (ABECB), and uncomplicated urinary tract infections (UTIs). The FDA also said that for some serious bacterial infections, the benefits of fluoroquinolones outweigh the risks, and it is appropriate for them to remain available as a therapeutic option.

Patients taking fluoroquinolones must also be vigilant and let their provider know immediately if they begin suffering from any new pain in their joints, tendons, or muscles. Additionally, if patients begin feeling any numbness in their arms and legs, a prickling or "pins and needles" sensation, or confusion and hallucinations, they should contact their health care provider right away so that they may be switched to a nonfluoroquinolone antibacterial drug for the remainder of their treatment regimen.

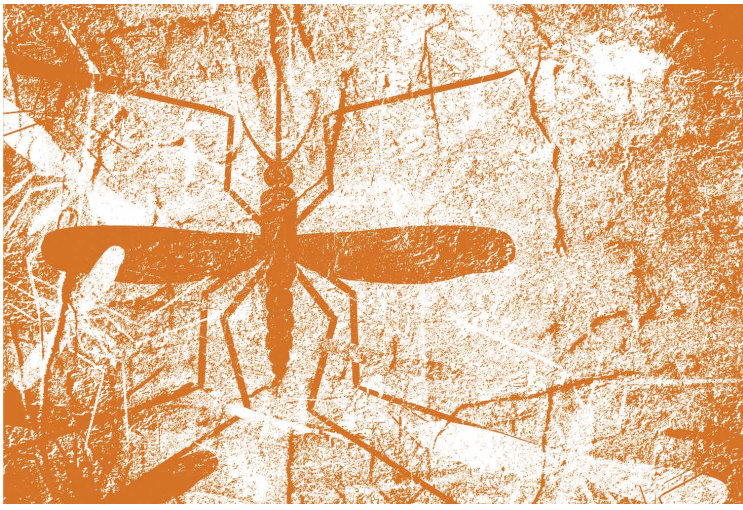
Avelox (Moxifloxacin); Cipro, both standard and extended release (ciprofloxacin); Factive (gemifloxacin); Levaquin (levofloxacin); and ofloxacin are the fluoroquinolones currently approved by the FDA for systemic use.

Additional adverse effects for patients taking fluoroquinolones could include tendinitis, tendon rupture, and joint swelling. Central nervous system afflictions could include depression and thoughts of suicide. Fluoroquinolones could also bring about skin rashes, sunburn, arrhythmia, and diarrhea, and could aggravate myasthenia gravis in patients who suffer from it. Warnings regarding these conditions are already included on the drugs' existing boxed warning.

"In addition to updating information in the Boxed Warning, we are also including information about these safety issues in the Warnings and Precautions section of the label," the FDA stated. "The Indications and Usage section contains new limitation-of-use statements to reserve fluoroquinolones for patients who do not have other available treatment options for ABS, ABECB, and uncomplicated UTIs."

The FDA added that it will continue to monitor and assess safety issues associated with fluoroquinolones and will issue any further updates if necessary.

1. US Food and Drug Administration. FDA Drug Safety Communication: FDA updates warnings for oral and injectable fluoroquinolone antibiotics due to disabling side effects. http://www.fda.gov/Drugs/DrugSafety/ucm511530.htm. Published July 26, 2016 Accessed August 26, 2016.



Skin Rash in a Recent Traveler? Think Dengue Fever

BY SHARON WORCESTER
FRONTLINE MEDICAL NEWS

Maintain clinical suspicion for dengue fever among individuals with recent travel to endemic areas who present with a rash and other signs and symptoms of infection, an expert advised at the American Academy of Dermatology summer meeting.

Dengue fever accounts for nearly 10% of skin rashes among individuals returning from endemic areas, and related illness can range from mild to fatal, said Jose Dario Martinez, MD, chief of the Internal Medicine Clinic at University Hospital J.E. Gonzalez, UANL Monterrey, Mexico.

"This is the most prevalent arthropod-borne virus in the world at this time, and it is a resurgent disease in some countries, like Mexico, Brazil, and Colombia," he noted.

Worldwide, more than 2.5 billion people are at risk of dengue infection, and between 50 million and 100 million cases occur each year, while about 250,000 to 500,000 cases of dengue hemorrhagic fever (DHF) occur each year, and about 25,000 related deaths occur.

In 2005, there was a dengue outbreak in Texas, where 25 cases occurred; in southern Florida, an outbreak of 90 cases was reported in 2009 and 2010. More recently, in 2015, there was an outbreak of 107 cases of locally acquired dengue on the Big Island, Hawaii. But in Mexico, 18,000 new cases occurred in 2015, Dr Martinez said.

Of the RNA virus serotypes 1 to 4, type 1 (DEN-1) is the most common, and DEN-2 and DEN-3 are the most severe,

but up to 40% of cases are asymptomatic, he noted, adding that the virus has an incubation period of 2 to 8 days. When symptoms occur, they are representative of acute febrile illness, and may include headache, high fever, myalgia, arthralgia, retro-orbital pain, and fatigue. A faint, itchy, macular rash commonly occurs at 2 to 6 days into the illness. According to the World Health Organization (WHO), a probable dengue fever case includes acute febrile illness and at least two of the following: headache, retro-orbital pain, myalgia, arthralgia, rash, hemorrhagic manifestations, leukopenia, or supportive serology.

"Sometimes the nose bleeds, the gums bleed, and there is bruising in the patient," Dr Martinez said. "Most important are retro-orbital pain and hemorrhagic manifestations, but also supportive serology."

About 1% of patients progress to DHF or dengue shock syndrome (DSS) during the critical phase (days 4-7) of illness. This is most likely in those with serotypes 2 and 3, but can occur with all serotypes. Warning signs of such severe disease include abdominal pain or tenderness, persistent vomiting, pleural effusion or ascites, and of particular importance—mucosal bleeding, Dr Martinez said.

By the WHO definition, a diagnosis of DHF requires the presence of fever for at least 2 to 7 days, hemorrhagic tendencies, thrombocytopenia, and evidence and signs of plasma leakage; DSS requires these, as well as evidence of circulatory failure, such as rapid and weak pulse, narrow pulse pressure, hypotension, and shock.

It is important to maintain clinical suspicion for dengue fever, particularly in anyone who has traveled to an endemic area in the 2 weeks before presentation. Serologic tests are important to detect anti-dengue antibodies. Immunoglobulin G is important because its presence could suggest recurrent infection and thus the potential for severe disease, Dr Martinez said. Polymerase chain reaction can be used for detection in the first 4 to 5 days of infection, and the nonstructural glycoprotein 1 rapid test can be positive on the first day, he noted.

The differential diagnosis for dengue fever is broad, and can include chikungunya fever, malaria, leptospirosis, meningococcemia, drug eruption, and Zika fever.

Management of dengue fever includes bed rest, liquids, and mosquito net isolation to prevent reinfection, as more severe disease can occur after reinfection. Acetaminophen can be used for pain relief; aspirin should be avoided due to risk of bleeding, Dr Martinez said. Hospitalization and supportive care are required for those with DHF or DSS. Intensive care unit admission may be required.

Of note, a vaccine against dengue fever has shown promise in phase III trials. The vaccine has been approved in Mexico and Brazil, but not yet in the United States.

For more on dengue fever, see the case report "Dengue Fever: Two Unexpected Findings" on page 408.

Pertussis Often Goes Undiagnosed, Especially in Adults

BY ABIGAIL CRUZ

FRONTLINE MEDICAL NEWS

A majority of pertussis cases in the United States may go undetected in people younger than age 50 years, particularly in adults, results of a retrospective database cohort study suggest.

"The incidence of pertussis in adolescents and adults is very difficult to quantify," wrote Chi-Chang Chen, MD, of IMS Health, Plymouth Meeting, Pennsylvania, and associates. Symptoms may be misdiagnosed as other respiratory illnesses; infected individuals may not seek treatment; and pertussis may not be considered as a possible diagnosis in adults, they noted.

To project the possible range of pertussis incidence in this population, investigators used three different models to analyze information from private insurance and laboratory databases as well as data from the Centers for Disease Control and Prevention for a 6-year period. The first method, which used medical claims for *International Classification of Diseases* (*ICD-9*) diagnosed pertussis, found an annual incidence rate of 9 per 100,000 population. The second used a proxy pertussis model that was based on symptoms that could indicate undiagnosed pertussis, showing an incidence rate of 21 per 100,000. The third method used pathogen data to estimate the fraction of cough illness statistically attributable to pertussis, resulting in an incidence rate of 649 per 100,000 population, which is 58 to 93 times higher than the *ICD-9* estimated incidence.

These estimates "highlight the need for improved preventive measures—such as increased vaccination—against pertussis," the investigators said, noting that immunization recommendations for additional age groups and research involving strategies to reduce waning immunity after vaccination should be considered.

1. Chen CC, Balderston McGuiness C, Krishnarajah G, et al. Estimated incidence of pertussis in people aged <50 years in the United States. *Hum Vaccin Immunother.* 2016;31:1-10. [Epub ahead of print]