

Some Hispanics Acquire Antibiotics Without an Rx

BY DAMIAN McNAMARA
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NEW ORLEANS — A substantial number of people in the U.S. Hispanic community self-medicate with oral antibiotics, according to a study presented at the annual conference of the Society of Teachers of Family Medicine.

Many countries in Latin America dispense antibiotics without a prescription, and individuals from these countries have cultural norms for self-medication, said Arch G. Mainous III, Ph.D. The researchers interviewed 219 self-identified Hispanics, and 45% indicated they had purchased nonprescribed antibiotics outside the United States at some time; 16% had imported them. "Those results were striking," said Dr. Mainous, professor of family medicine at the Medical University of South Carolina, Charleston. "Another striking feature was that 19% had acquired antibiotics not prescribed for the person in the United States; 93% [of them] said they got them in stores."

Latin America has a high level of antibiotic resistance, Dr. Mainous said. U.S. interventions on resistance have decreased antibiotic prescribing, but they focus on prescribing. To correct inappropriate acquisition and use, patient education materials should not only be available in Spanish, but also should be culturally sensitive, he suggested.

The findings of the study, Dr. Mainous said, "point to a large unrecognized reser-

voir of nonprescribed antibiotics likely used for inappropriate self-medication. We know from other studies that people in countries where antibiotics are available tend to take subtherapeutic doses."

Trained bilingual interviewers used a standard questionnaire to learn acquisition history and attitudes regarding nonprescribed antibiotics. All participants were 18 years and older and were recruited from one of two clinics in Charleston. The individuals were not necessarily patients, Dr. Mainous said.

The majority, 75%, indicated Mexico as their country of birth; 41% said they had been in the United States fewer than 4 years; and 90% did not have medical insurance.

The common cold, ear infections, cough, and sore throat were the primary illnesses for which respondents took nonprescribed antibiotics.

A large proportion (31%) of Hispanics surveyed thought antibiotics should be available over the counter, Dr. Mainous said. The belief that antibiotics should be available over the counter and past purchases outside the United States were highly related, he added.

Of interviewed individuals, 64% said they acquired antibiotics without a prescription because it was preferable to a physician visit. "Only 7% said there was a language barrier, so most did not want to spend the money or go to a doctor."

Dr. Mainous pointed out that this phenomenon is not limited to Hispanics. "People in the Philippines, Taiwan, and Bangladesh will also buy subtherapeutic doses for self-medication." ■

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CLINICAL CAPSULES

Reasons for Vaccine Refusal

Approximately 69% of 277 parents of non-vaccinated children cited concerns that vaccines might cause harm, said Daniel A. Salmon, Ph.D., of Johns Hopkins University, and his colleagues (*Arch. Pediatr. Adolesc. Med.* 2005;159:470-6). In a case-control study, the investigators reviewed data from surveys of 976 parents of vaccinated children and 277 parents of children who received nonmedical exemptions to school vaccination requirements.

Varicella was the most often refused vaccine and was not given to 147 (53%) of the 277 exempt children. Polio was the least often refused vaccine and was not given to 45 (16%) children.

Other reasons for refusing vaccination included concerns that the vaccines might overload the immune system (49%), belief that the child was not at risk for the disease (37%), that the disease was not dangerous (20%), and that that vaccines might not work (13%).

Parents of exempt children were less likely to report that their child's primary health provider was a physician, compared with parents of vaccinated children (76%

vs. 94%). In general, parents of exempt children were more likely to be older than the median age of 36-40 years and to have a higher level of education compared with parents of vaccinated children. The parents of exempt and vaccinated children were similar in terms of family income and race.

One Swab Is Enough

Use of two throat swabs did not significantly improve the sensitivity of the OIA MAX test for group A streptococcus in a randomized study of 363 children aged 5-18 years with acute pharyngitis, said Elias N. Ezike, M.D., of the Children's Hospital of Michigan, Detroit, and his associates (*Arch. Pediatr. Adolesc. Med.* 2005;159:486-90).

One throat swab was obtained from a group of 117 children (group 1), and two swabs were obtained from a group of 186 children (group 2). The sensitivity was 94.7% and 100% for groups 1 and 2, respectively, and the specificity was 92.4% and 96.3% for groups 1 and 2, respectively. Overall, the OIA MAX test identified group A streptococcus in 148 of the 363 (40.8%) patients, including 71 in group 1

(40.1%) and 77 in group 2 (41.4%). Clinical presentations were not significantly different between children with and without group A streptococcus, and there was no association between the severity of pharyngitis and the sensitivity of the OIA MAX test.

Group B Strep Poorly Diagnosed

A differential diagnosis in adolescents with purulent vaginal discharge should include group B streptococci, said Liana R. Clark, M.D., and Marisa Atendido of the Children's Hospital of Philadelphia (*J. Adolesc. Health* 2005;36:437-40).

The investigators conducted a retrospective analysis of 13 adolescents (mean age 16 years) who demonstrated clinical signs of infection and tested positive for group B streptococci. Of these, 12 of 13 had a purulent cervicovaginal discharge. Of the 12, 3 had cervicitis, 3 had inflamed vaginal mucosa, 2 had vaginal erythema, and 1 had vaginal bleeding. Only one girl was accurately diagnosed with group B streptococci at the time of her visit, and she was treated with cefuroxime. Three were misdiagnosed with STDs. Small numbers and lack of asymptomatic controls limited the study.

West Nile Virus Doesn't Play by the Rules of IgM

BY GWENDOLYN HALL
Associate Editor

MIAMI BEACH — It takes more than a positive serum IgM by enzyme-linked immunosorbent assay to make a definitive diagnosis of West Nile virus encephalitis in a patient with neurologic symptoms, Karen L. Roos, M.D., said at the annual meeting of the American Academy of Neurology.

For example, an elderly patient presents with 4 days of confusion and tremor, and her serum IgM is positive for West Nile virus on enzyme-linked immunosorbent assay (ELISA). Spinal fluid analysis indicates she has a lymphocytic pleocytosis. Does this patient have West Nile virus encephalitis?

Maybe not, according to Dr. Roos. "When I was in medical school, I learned that the IgM was positive early, became negative quickly, and then the IgG became positive. But West Nile isn't playing by the rules of medical school," Dr. Roos said.

Serum West Nile IgM level on ELISA can remain positive for 6-12 months or longer after infection, and only 1 in 150 people develop neurologic symptoms from the virus, said Dr. Roos, professor of neurology at Indiana University, Indianapolis.

Serum IgM level is therefore not sufficient evidence to assume that the patient's symptoms are due to West Nile virus infection. "Don't put a lot of stake in a serum West Nile virus IgM," Dr. Roos said.

The neurologic symptoms of this patient can be definitively attributed to West Nile virus infection if the virus is isolated in tissue, blood, or cere-

brospinal fluid or IgM antibody is found in the cerebrospinal fluid. IgM antibody cannot cross the blood-brain barrier, so central nervous system infection should be "strongly suspected" if IgM antibody is found in cerebrospinal fluid.

Also, in the case of West Nile encephalitis or any viral encephalitis or meningitis where the causative virus is unknown, "if you send acute and convalescent titers in patients with viral meningitis or encephalitis, you will very often find the virus," Dr. Roos said. There will be a fourfold increase in IgG antibodies between acute and convalescent serums.

This is not useful for diagnosis during the acute stage, but patients are considerably more able to put up with their headaches and other continuing symptoms in convalescence if they know which virus they had, Dr. Roos said.

A patient may not come to you in the acute phase, and there may be no serum findings from this phase. In this case, you may still be able to pin down the virus by demonstrating a stable elevated antibody titer.

If you order serology and can demonstrate that the patient maintains a stable antibody titer of more than 256 mg/dL, for example, "you can then say that's a presumptive diagnosis. ... Realistically, this is the best we can do, sometimes," she said.

In general, IgM or IgG serum antibody titers that are positive for West Nile virus on ELISA should be confirmed by plaque reduction neutralization assay in cell culture to eliminate false positives from cross-reactivity with other flaviviruses—particularly St. Louis encephalitis virus, she said. ■

Pocket Pets May Pack Salmonella

The Centers for Disease Control and Prevention identified 28 cases of *Salmonella enteritidis* serotype *typhimurium* associated with pet rodents including hamsters, mice, and rats between December 2003 and October 2004 (*MMWR* 2005;54:429-32). The mean age of those affected was 16 years, and seven cases occurred in children younger than 7 years.

Particularly severe cases occurred in two 5-year-old boys. The first of these occurred in June 2004 in Minnesota, when the boy became ill 4 days after he received a pet mouse. The second case occurred in August 2004 in South Carolina, when the boy became ill 9 days after he received a pet hamster. In both cases, the children developed fevers, diarrhea, and abdominal cramping, and stool cultures yielded *S. typhimurium*. Both pet rodents died within a week of their purchase, and a culture from the mouse also yielded *S. typhimurium*. Rodents linked to all 28 cases were purchased from multiple retail pet store chains and distributors, and *S. typhimurium* was recovered from pet transport containers and from bins containing rodent droppings.

—Heidi Splette