

Prevalence of Tapeworm Infection Rising in U.S.

BY DAMIAN McNAMARA
Miami Bureau

MIAMI BEACH — Public health officials are stepping up efforts to combat cysticercosis, a parasitic infection with dire neurologic consequences that is on the rise in the United States, according to James H. Maguire, M.D., chief of the parasitic diseases branch of the National Center for Infectious Diseases at the Centers for Disease Control and Prevention, Atlanta.

Cysticercosis is becoming increasingly recognized in U.S.-born residents, although it is still primarily a disease of immigrants from countries such as Mexico, Central America, sub-Saharan Africa, India, and East Asia, Dr. Maguire said at the annual meeting of the American Society of Tropical Medicine and Hygiene.

Cysticercosis is being reported in New Mexico, New York, and especially California, states with a large number of immigrants. However, "We saw 6-12 cases

per year in Boston when I worked there—not a hotbed of immigration," he added. Each year in the United States, there are an estimated 1,000 new cases of cysticercosis, which is a leading cause of adult-onset epilepsy in endemic areas such as Central America and Africa.

"The real message is if someone comes in with seizures and they have a single lesion on CT or MRI, it could be cysticercosis," Dr. Maguire commented. Physicians need a high index of suspicion; an

accurate diagnosis could spare a patient neurosurgery.

Cysticercosis is acquired after accidental ingestion of the eggs of the pork tapeworm *Taenia solium*. Infected people shed the eggs in their feces and infection can spread through contaminated food, water, or surfaces.

Once the eggs hatch in the stomach, they penetrate the intestine and travel through the bloodstream. The eggs produce characteristic cysts anywhere in the body; cysts in the brain cause neurocysticercosis and produce seizures and other neurologic sequelae, according to Dr. Maguire.

"It's a nasty infection," Dr. Maguire said during an interview with this newspaper.

If a central nervous system cyst blocks the flow of cerebrospinal fluid, hydrocephaly can ensue. Surgery or shunt placement is indicated in some of these patients, but in most cases the cysts resolve on their own. Other neurologic sequelae include a permanent, stroke-like syndrome. Even the scar left behind by a former cyst can become the focus for future seizures, Dr. Maguire warned.

Patients are generally treated with antiparasitic drugs in combination with anti-inflammatory agents.

Infection typically comes from eating contaminated pork, fruits, and vegetables, but *T. solium* is also spread through contact with infected people or fecal matter. Federal standards for the U.S. pork industry protect most Americans, Dr. Maguire said.

Larval stage infection with *T. solium* leads to symptomatic cysticercosis, but people with an adult tapeworm can be unknowing sources of infection.

Four cases of neurocysticercosis in New York City among Orthodox Jews—who do not eat pork—were initially puzzling to investigators. Only one had traveled to an endemic area. However, six domestic employees were tested; one was found to have had an active infection with taenia species and another had a positive serologic test.

"If a person is infected by someone with an adult tapeworm, contact tracing becomes very important," Dr. Maguire said.

A strategy for preventing the infection is to "go after the disease at its source" in endemic areas and improve immigrant health, Dr. Maguire said.

The World Health Organization and other agencies have an active cysticercosis eradication program. As part of a strategy to eradicate the infection at its source, pigs are being vaccinated against the parasite, but adoption of the program is not yet widespread.



For more information, talk
to your GSK sales representative.

Avandia[®]
rosiglitazone maleate



Avandia is a registered trademark and Get Rosi on Board is a trademark of the GlaxoSmithKline group of companies.
©2004 The GlaxoSmithKline Group of Companies All rights reserved. AV2417R0