

Editorial

Asymptomatic Hospital Foodhandlers Should Not Be Screened Routinely for Intestinal Parasites

Duc J. Vugia, MD, MPH; Patricia M. Griffin, MD

Identification of parasites during routine stool examinations of foodhandlers is addressed in this issue by Germanaud et al, who found that 27 (48%) of 56 foodhandlers in a French hospital had at least one stool specimen test positive for parasites as part of their annual examination over a six-year period.¹ *Blastocystis hominis*, the pathogenicity of which is still unclear, was found in 41% of positive results. Based on these findings, the authors suggest that foodhandlers may pose a risk to the increasing number of immunocompromised patients in hospitals. Therefore, they recommend that stool examination of hospital foodhandlers be performed routinely.

See also page 452.

We have several reservations about this recommendation. A routine stool examination will detect only pathogens present the day the specimen is collected; a foodhandler may become infected the very next day. Because shedding may be intermittent, a single stool examination is often insufficient to detect all protozoan infections, even in a person with symptoms.² Thus, a negative result may give a false sense of security and lead to lapses in hygiene. The only effective way to prevent transmission of pathogens from asymptomatic foodhandlers to patients is to train and supervise these workers in proper hand-

washing techniques before preparing food and after using the toilet. The authors did not mention whether any of the foodhandlers were symptomatic. Of course, any foodhandler with an acute diarrheal illness should be excluded from foodhandling until he or she is well again.

In a review of reported foodborne outbreaks in the United States related to hospitals, none of 52 outbreaks with confirmed etiology was due to a parasitic agent, and poor personal hygiene was considered a contributing factor in only 13% of outbreaks.³ Germanaud et al do not mention whether any patient in their hospital had a nosocomially acquired parasitic infection during the six-year period. Furthermore, of the pathogens identified in their report, only *Strongyloides stercoralis* is known to cause opportunistic infection in some immunocompromised patients, rarely in those with acquired immunodeficiency syndrome (AIDS).^{4,5}

Routine parasitologic examination of hospital foodhandlers is unlikely to be cost effective. With 56 foodhandlers surveyed annually over six years, Germanaud et al would have examined 336 specimens, and only 5 (1%) (excluding those with eggs of *Schistosoma mansoni*, which are not known to cause illness by direct transmission) yielded possible pathogens.

The number of immunocompromised patients, particularly patients with AIDS, is increasing in many

From the Parasitic Diseases Branch, Division of Parasitic Diseases (Dr. Vugia), and the Foodborne and Diarrheal Diseases Branch, Division of Bacterial and Mycotic Diseases (Dr. Griffin), National Center for Infectious Diseases, Centers for Disease Control and Prevention, Public Health Service, U.S. Department of Health and Human Services, Atlanta, Georgia.

Address reprint requests to Duc J. Vugia, MD, Division of Parasitic Diseases, NCID/CDC Mailstop F-13, 4770 Buford Highway NE, Atlanta, GA 303413724.

Vugia DJ, Griffin PM. Asymptomatic hospital foodhandlers should not be screened routinely for intestinal parasites. Infect Control Hosp Epidemiol 1993;14:457-458.

hospitals. They may be at higher risk for foodborne infections due to impaired host factors. In the United States, bacterial pathogens, particularly *Salmonella*, cause the vast majority of foodborne outbreaks in hospitals, and the major contributing factors are improper holding temperatures and inadequate cooking.³ Foods of animal origin (meat, poultry, eggs, and shellfish) should be well cooked, and cooked foods should be held at temperatures too hot ($\geq 140^{\circ}\text{F}$ or $\geq 60^{\circ}\text{C}$) or too cold ($< 40^{\circ}\text{F}$ or $\leq 4^{\circ}\text{C}$) to permit multiplication of bacterial pathogens. Raw or undercooked foods of animal origin should not be served to the immunocompromised patient.^{3,6}

Routine periodic screening of foodhandlers will not detect or prevent most acute infections, will not prevent most foodborne outbreaks, is not cost effective, and therefore is not recommended.⁷ A more beneficial approach is to provide routine education and training in good personal hygiene and hygienic foodhandling to all hospital foodhandlers. With good personal hygiene and safe foodhandling, an asympto-

matic hospital foodhandler who happens to carry parasites or any other enteric pathogen should not present a significant risk to immunocompromised patients.

REFERENCES

1. Germanaud J, Poisson D, Padonou C. Parasitologic infestation in hospital foodhandlers and risk of transmission to AIDS patients. *Infect Control Hosp Epidemiol* 1993;14:452-453. Letter.
2. Thompson RB Jr, Haas RA, Thompson JH Jr. Intestinal parasites: the necessity of examining multiple stool specimens. *Mayo Clin Proc* 1984;59:641-642.
3. Villarino ME, Vugia DJ, Bean NH, Jarvis WR, Hughes JM. Foodborne disease prevention in healthcare facilities. In: Bennett JV, Brachman PS, eds. *Hospital Infections*. 3rd ed. Boston, MA: Little, Brown and Co.; 1992:345-358.
4. Smith PD, moderator. Gastrointestinal infections in AIDS. *Ann Intern Med* 1992;116:63-77.
5. Lucas SB. Missing infections in AIDS. *Trans R Soc Trop Med Hyg* 1990;84(suppl1):34-38.
6. Griffin PM, Tauxe RV. Food counseling for patients with AIDS. *J Infect Dis* 1988;158:668. Letter.
7. *Health Surveillance and Management Procedures for Foodhandling Personnel*. Geneva, Switzerland: World Health Organization, 1989. WHO Technical Report Series, no. 785.