Quinacrine for Treatment of Giardiasis

To the Editor:

*Giardia lamblia* is a common intestinal protozoa, leading to longstanding intestinal complaints in many of those infected. Chronic symptoms may occur intermittently and may be florid or subtle. Diagnosis can often be confirmed by well-performed stool examinations or with an enzyme immunoassay (EIA) to detect *G. lamblia* fecal antigen. Even after these, as well as other invasive procedures, some cryptic *G. lamblia* cases cannot be parasitologically confirmed. In patients with strong epidemiological and clinical evidence of giardiasis, marked improvement and apparent cure may be obtained after empiric treatment with anti-*Giardia* drugs.1 Failure to consider giardiasis, or inability to confirm a parasitologic diagnosis and reluctance to empirically treat, deprive those with cryptic chronic giardiasis of the opportunity to be cured with a simple, safe, and inexpensive treatment regimen.

To treat giardiasis, there are presently only two commercially available drugs in the United States: metronidazole (Flagyl) and furazolidone (Furoxone). Other nitroimidazole drugs, including tinidazole (Fasigyn) and ornidazole (Tiberal), have been found effective in other countries but are unlicensed in the United States. Paromomycin (Humatin), an FDA approved drug, has had variable effectiveness in studies in other countries, primarily in infected children.2

Metronidazole is currently considered the treatment of choice for giardiasis in the United States, (though never approved by the FDA for this indication). Cure rates ranging from 85 to 95% have been reported and it is generally well-tolerated in a course of 250 mg three times a day for 7 days.3 Furazolidone has as its major indication in the United States the treatment of giardiasis. It comes in a liquid formulation, making it particularly useful for young children. Reported cure rates range from 75 to 84% and certain troublesome side effects may occur.3

Quinacrine (Atabrine) is the most effective drug against giardiasis, with reported cure rates of 92–95%.3 Quinacrine was withdrawn from the market by the manufacturer (Sanofi Winthrop) and it is unavailable commercially worldwide. Quinacrine remains an FDA-approved drug and some pharmacies have been compounding quinacrine USP powder into 100 mg gelatin capsules. Quinacrine treatment should be attempted in the approximately 10% of cases of proven or strongly suspected giardiasis not responding to other available drugs. A rare case of parasitologically proven giardiasis not responding to any of these drugs alone may be cured with a combined course of metronidazole and quinacrine.4 In our experience, numerous individuals with suspected but unproven giardiasis and nonresponsive to available drugs have obtained marked and continuous improvement only after treatment with quinacrine. We are unaware of known beneficial effect of quinacrine on any other infectious or noninfectious diarrheal illness.

Quinacrine is not free of side effects, and one of us has reported a 1.5% incidence of toxic psychosis with the formerly used 7 day course of 100 mg three times a day.1 More recently, using a five day course, no toxic psychosis cases have been seen.

Quinacrine has an important role in treating recalcitrant and cryptic giardiasis and efforts should be made to again have it readily available in all pharmacies.


References


Protection of Travelers against Hepatitis A Viral Infection in Developing Countries

To the Editor:

In a recent issue of the *Journal of Travel Medicine*, Laurichesse et al.,1 describe symptomatic hepatitis A virus (HAV) infection in five young French scouts during their trip to a remote village in the Ivory Coast, West Africa. The authors point out that prior HAV vaccination of the 16 scouts and their leaders before leaving France would have protected them from HAV infection. Also, there can be no disagreement with immunization of youngsters traveling from developing countries to HAV endemic countries. The question is whether it is wise to exclude elderly persons from HAV vaccination when they travel to high risk locations.

The concern is that protective antibodies acquired decades earlier following a course of HAV hepatitis might have fallen to a negligible level. Such low levels
The Authors Reply

To the Editor:

Following the publication of symptomatic cases of hepatitis A virus (HAV) infection affecting young scouts during a stay in a remote village in Ivory Coast, West Africa, the question raised by S.C. Arya is whether or not it would be wise to exclude elderly persons from HAV vaccination when they travel from low to high endemic areas. Our report did not suggest such a recommendation but pointed out the need for immunizing young travelers from low to high endemic areas.

Currently, the decreasing HAV sero-prevalence rate in industrialized countries and the high incidence of hepatitis A among travelers consistently support the implementation of active immunization using a formalin inactivated hepatitis A vaccine with a simplified schedule (two doses 6 to 12 months apart) for young individuals who are likely to be susceptible to HAV infection. This vaccine policy does not exclude elderly people from active protection against hepatitis A. However, since most adults over 40 years of age and elderly people have developed hepatitis A and have naturally acquired antibodies, it would be cost-effective to perform a prevaccination serologic screening for total HAV antibodies. A positive test suggests natural immunity and effective protection against hepatitis A, and will save vaccine doses.

In France, such a prevaccination screening is recommended for travelers over 40 years of age. A booster dose of combined polio and tetanus vaccine is recommended for travelers who failed to receive a dose of vaccine for more than 10 years using, when available, the inactivated polio vaccine combined with tetanus toxoid to prevent imported cases of poliomyelitis such as those reported. In addition, elderly persons who contribute to an increasing proportion of West European travelers from low to high endemic areas are more likely to develop a symptomatic or even severe hepatitis A than youngsters. They have to be offered appropriate medical management including hygienic counseling and information on HAV transmission and infection.

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