

The Use of Combination Vaccines in International Travelers Visiting Countries with High Endemic Rates of Hepatitis A and/or Hepatitis B

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Abstract: Hepatitis A and B represent a significant threat to international travelers. Both diseases are preventable through vaccination, though fewer than half of at-risk visitors in endemic regions are protected. Current vaccination recommendations should be revised to ensure adequate immunity for all international travelers against hepatitis A and B, as both diseases pose comparable danger. Since exposure to the viruses cannot be predicted, vaccination should be offered to all individuals visiting destinations with intermediate or high endemicities of hepatitis A and/or B, regardless of length of stay and standard of accommodation. Risk groups and endemicity of hepatitis A and B overlap, therefore, a combination vaccine against both forms is beneficial.

Key words: Twinrix, travel medicine, hepatitis vaccination

INTRODUCTION

The hepatitis A and B viruses (HAV and HBV, respectively) are considerable threats to the health of international travelers. Both viruses have a substantial global prevalence and the likelihood of infection is particularly high in developing regions such as Latin America, the Caribbean, Africa, Asia and parts of Eastern Europe (Fig. 1)^[1]. With an estimated infection rate of 3.0-11.0 per 100,000 visitors per month of stay, hepatitis A is regarded as one of the most common vaccine-preventable diseases among travelers visiting developing countries^[2]. Symptomatic infection with HBV in unvaccinated travelers is seen at a slightly higher frequency, occurring in approximately 20-60 per 100,000 persons per journey^[3]. Nevertheless, rates for both forms of hepatitis likely underestimate the actual risk for infection, as they do not take into account asymptomatic cases or individuals diagnosed and treated while abroad.

In 2005, 4,488 clinical cases of acute hepatitis A were reported in the United States (US)^[4], 16% of which were reportedly due to exposure during international travel^[5]. Despite an improvement from

previous years, the estimated total number of cases of HAV (including asymptomatic patients) reached as many as 19,000^[4]. Acute HBV infections are somewhat less common, with 5,494 reported clinical cases and an estimated 15,000 symptomatic and asymptomatic cases in 2005^[4]. However, the true impact of HBV was reflected in the additional 1.25 million people in the US who developed chronic disease as a result of infection and the 3,000-5,000 deaths due to chronic liver disease^[4].

Impact: In terms of reduced productivity and impact on health care resources, hepatitis generates a significant economic burden. For example, in 1997, 63,363 recorded symptomatic HAV infections in the US were associated with 829,000 lost working days, over 8,000 hospitalizations and an annual overall cost of more than \$480 million^[6]. Although no data are currently available on the specific costs of HBV, acute infections, or long-term treatment for chronic infections, it may be assumed that each contributes a significant amount to the overall burden.

Although self-limiting, the infections may incapacitate the individual for an average of 4-10

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