

## PRACTICAL DERMATOLOGY

# Immunization Against Viral Hepatitis: An Obligatory Recommendation in Consults for Sexually Transmitted Diseases

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**Abstract.** Numerous international institutions recommend vaccination against hepatitis B for all non-immune patients that consult for a sexually transmitted disease. It is a simple and safe procedure, frequently forgotten in dermatological clinics. Hepatitis B vaccine is administered via intramuscular route in the deltoid in 3 doses (at months 0, 1 and 6). The vaccine against hepatitis A is indicated for non-immune homosexual men that have a sexually transmitted disease. There exists a combined vaccine A + B that facilitates the administration in these cases.

Key words: hepatitis B, vaccination, hepatitis A, sexually transmitted diseases.

### INMUNIZACIÓN CONTRA LA HEPATITIS VÍRICA: UNA RECOMENDACIÓN OBLIGADA EN LAS CONSULTAS POR ENFERMEDADES DE TRANSMISIÓN SEXUAL

**Resumen.** Numerosos organismos internacionales recomiendan la vacunación contra la hepatitis B en todos los pacientes no inmunes que consultan por una enfermedad de transmisión sexual. Se trata de un procedimiento sencillo y seguro, frecuentemente olvidado en las consultas dermatológicas. Se administra por vía intramuscular en el deltoides, en tres dosis (meses 0, 1 y 6). La vacunación contra la hepatitis A está indicada en varones homosexuales no inmunes que padecen una enfermedad de transmisión sexual. Existe una vacuna combinada A + B, que facilita la administración en estos casos.

Palabras clave: hepatitis B, vacunación, hepatitis A, enfermedades de transmisión sexual.

## Introduction

There is a broad consensus regarding the usefulness of hepatitis vaccination in patients with sexually transmitted diseases (STD). However, it does not seem to be a habitual measure in dermatology practice.

Hepatitis B and, to a lesser extent, hepatitis C and D are transmitted by a sexual route. Less frequently, the transmission of hepatitis A via male homosexual relations, especially in men with multiple partners and in those who practice oral-anal or digital-anal sex, has been reported.<sup>1</sup> At the present time vaccines against hepatitis A and B are available.

Hepatitis B is one of the most serious worldwide public health problems. It is estimated that 30% of the world population show serologic evidence of infection by the hepatitis B virus (HBV). Chronic infection by this virus is one of the causes of hepatocellular carcinoma. After tobacco, HBV is the most common known human carcinogen.<sup>2</sup> When HBV infects adults, it leads to chronic hepatitis in 5% to 10% of patients. Of those infected, between 15% and 25% die of chronic liver disease, cirrhosis, or hepatocellular carcinoma, and they are themselves a major source of infection.<sup>3-5</sup> In developing countries, transmission of hepatitis B is produced mainly through mother-to-infant transmission, child-to-child transmission, or through parenteral exposure to contaminated products. In Spain the main routes of transmission are parenteral exposure (drug use or accidental exposure in health care workers) and sexual transmission.

Prevention of hepatitis B consists of avoiding parenteral exposure (from drug use or accidental exposure), sexual exposure (mainly through abstinence, monogamy, or the use of condoms), and vaccination. Vaccination against

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hepatitis B is the most effective preventive measure against the disease.<sup>7</sup> It produces immunity to infection in more than 95% of vaccinated individuals and prevents its complications (thereby becoming the first cancer vaccine). Immunity in healthy individuals is believed to last for life.

In 1991 the World Health Organization recommended that vaccination for hepatitis B be included, as far as each country's resources allow, in childhood vaccination schedules. In Spain, the various autonomous communities have been adding it to their vaccination schedules so that between 1991 and 1996 all autonomous communities included it in the vaccination schedules of preadolescents. Vaccination of infants was not instated throughout Spain until 2002. In 2002 the percentage of adolescents vaccinated throughout Spain reached 80%.<sup>5,8</sup> Most adults, however, are susceptible to infection.

## Hepatitis B Vaccination: Indications

Children in Spain are vaccinated against hepatitis B.

In adults, the Ministry of Health and Consumer Affairs recommends vaccinating risk groups, which include the population that changes sexual partners frequently.<sup>5</sup> Other guidelines recommend vaccinating "promiscuous" adults. Such definitions are subjective and lead to awkward questions during consultations. Their usefulness lies in their ability to identify patients at risk for acquiring an STD. In practice, STD infection is a clear indication that the patient is at risk for acquiring another, and thus the presence of STDs can be considered a pragmatic and more objective expression of the Ministry of Health and Consumer Affairs' definition of a risk group. Likewise, other organizations, such as the Centers for Disease Control, hold that all patients with STDs should be considered at risk for hepatitis B, and that they should therefore be vaccinated.<sup>3,9</sup> Other organizations also recommend that their partners be vaccinated.

## Hepatitis B Vaccines: Administration

The available vaccines against hepatitis B are extremely effective and safe. They are obtained by recombinant DNA technology from yeast cells that produce only hepatitis B surface antigen and do not contain the virus.

The vaccine is administered by deltoid intramuscular injection. Administration at different injection sites, such as the gluteus, is less effective.

Three doses are administered: on the first visit, 1 month later, and 6 months after that. For patients older than 16 years, the doses of the vaccines currently available are as follows: Hbvaxpro, 10 mg/mL prefilled syringe (Aventis

Pasteur MSD), or Engerix-B 20 mg/mL prefilled syringe (GlaxoSmithKline).

Other vaccines, such as the hepatitis A vaccine, can be administered on the same day, but it is recommended a different arm be used.<sup>2</sup> In cases where vaccination against both hepatitis A and hepatitis B is recommended, Twinrix (GlaxoKlineSmith), a commercially available combination vaccine that simplifies administration, may be used.

For economic reasons, some autonomous communities recommend prevaccination serologic testing to avoid vaccinating patients who are already immune. Vaccinating patients who are already immune does not represent a risk, however. In any event, in the setting of a STD clinic, the most practical strategy would probably be to order STD serology on the first visit and subsequently inform the patient of the results and prescribe hepatitis vaccination if necessary.

Interruption of the vaccination series does not require that it be restarted. Even in cases of prolonged interruption, only the doses not yet received need to be administered, and postvaccination serologic testing is not necessary.<sup>5</sup>

## Hepatitis B Vaccines: Safety

Over a billion doses of hepatitis B vaccine have been administered since 1982.<sup>10</sup> The vaccine is very well tolerated. The most common adverse reactions are local: erythema, induration, or pain (in 3%-29% of those vaccinated). Systemic reactions such as fatigue, fever, or malaise have rarely been observed.<sup>5</sup> The risk of anaphylaxis is 1 case per 1.1 million doses and no cases of fatal anaphylaxis have been reported.<sup>9</sup>

Vaccination is contraindicated in patients who have had severe reactions to previous doses of the vaccine or to its components (all are obtained from the yeast *Saccharomyces cerevisiae* and the excipients can be found in the vaccination guidelines of the Ministry of Health and Consumer Affairs).<sup>5</sup> The vaccine can be used during pregnancy if the risk of infection by HBV is high. Its administration is not recommended in the presence of an infection accompanied by high fever.

## Hepatitis A Vaccines

The hepatitis A vaccine is used to prevent acute hepatitis and its complications, as the hepatitis A virus does not cause chronic hepatitis. It is indicated in homosexual men who are not immune and who have multiple sexual partners.<sup>5</sup> As in the previous case, we believe that this indication can be seen as referring to those who consult for STD.

This vaccine is also safe. Only 2 doses are administered: an initial dose and another 6 to 12 months later (4 brands are marketed in Spain<sup>5</sup>). A combined vaccine against the

hepatitis A and B viruses is available for adults (Twinrix Adult, GlaxoSmithKline). This vaccine is administered in 3 doses (at 0, 1, and 6 months). It is more convenient, but the disadvantage is that it is not reimbursed by the Spanish national health care system (although this may vary according to the vaccination schedule of each autonomous community).

## Other Practical Aspects of Vaccination

In the Spanish national health care system, public health has been transferred to the autonomous communities, and thus vaccination policies may vary from one to another.

Scheduled vaccinations are free in all autonomous communities, but policies regarding optional vaccinations vary according to the autonomous community. In some communities such vaccines are dispensed by prescriptions that must be supported by a physician's report. In Galicia, for example, vaccination, when indicated, is free at all recognized vaccination centers. All public healthcare facilities and private ones that request it and fulfill some simple requirements are considered recognized vaccination centers.

For information regarding a specific autonomous community, it is probably advisable to contact the appropriate public health bodies. Depending on the situation, it might be more practical to refer the patient to the department of preventive medicine or to primary care. The approximate cost of a complete hepatitis B vaccination series, if paid for by the user, is about €60.

### Key Points

Hepatitis B vaccination should be recommended for all nonimmune adults with STD.

The vaccine is administered in 3 doses (at 0, 1, and 6 months).

It is only contraindicated in patients with a history of severe reactions to vaccines.

Vaccination against hepatitis A should be offered to nonimmune homosexual men with STD.

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### Conflict of Interests

The author declares no conflicts of interest.

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