Hepatitis vaccination in chronic liver diseases

Summary of the discussion

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Reporter : P. Michielsen, University of Antwerp.

Which hepatitis A prevention policy is most appropriate in patients with chronic liver disease ?

- no prevention, except sanitary measures as usual
- hepatitis A vaccination even if the risk of exposure is to be considered low
- first screen for hepatitis A immunity, hepatitis A vaccination when no immunity
- hepatitis A vaccination only when the risk of exposure is substantial (frequent traveling to endemic regions, day care working, health care working in paediatric unit,...)

Comments

1. Risk factors

B. Bell : In the US hepatitis A is frequent and in at least 50% of cases no clear risk factor can be detected.
P. Van Damme : Based on data from sentinel general practitioners' practices in Belgium, 40% of hepatitis A cases are of unknown origin. The last 5-10 years the cases move towards adolescence and young adult age. In the general population the immunity for hepatitis A is 50-55% (1,2).
F. Nevens : In Belgium, more and more older people have time and money to travel, a.o. to endemic regions for hepatitis A. If not protected, they have a risk of substantial morbidity and even mortality when infected with hepatitis A.
P. Van Damme : Our changing life-style has increased the likelihood of exposure to HAV at an age when symptoms are more severe. Overseas travel is common and changing migration patterns increase the chances of importing the virus to Western Europe. Back in Europe we are living in a 'dining out' society with a preference for exotic and fast food and hence exposure to a far wider range of food (3).

2. Testing for immunity

B. Bell : Testing for immunity to hepatitis A depends on the epidemiology of the disease. In the US, it is worthwhile to screen even a young patient with chronic hepatitis B due to intravenous drug use for hepatitis A immunity.
P. Van Damme : The age from which prevaccination testing for hepatitis A should be considered is different from one population to another. In Israel it has been shown to be 30 years, whereas in Switzerland with its high hygienic standard it is 60 years. In Belgium, above the age of 35 it is cost-effective to test for immunity to hepatitis A when considering hepatitis A vaccination (2).

3. Response rate to hepatitis A vaccination in patients with chronic liver disease

P. Van Damme : The hepatitis A vaccine is highly immunogenic, even in immunocompromised and chronic liver disease patients (4).
B. Bell : The response rate to hepatitis A vaccination has been shown to be excellent in patients with chronic liver disease, except for patients with end stage liver disease and after transplantation. — However, the mean geometric titres of anti-HAV are lower than in healthy adults (5).

4. Post exposure prophylaxis

B. Bell : It is important to distinguish between routine pre-exposure prophylaxis, such as when patients with chronic liver disease come to the office for routine care, and a situation of a recognised exposure to hepatitis A virus. In the latter case one should not wait for laboratory results to determine susceptibility, but administer post exposure prophylaxis immediately. In the US, household, sex, and other close personal contacts of hepatitis A cases receive immune globulin. If a patient belongs to a group for which hepatitis A vaccination is recommended, such as chronic liver disease patients in the US (6), hepatitis A vaccination can be given at the same time. Hepatitis A vaccination alone is not recommended for post exposure prophylaxis.
P. Van Damme : The official recommendation for post exposure prophylaxis from the Health Inspector in Belgium is immediate administration of immunoglobulins (0.02 ml/kg[a]). However, we are moving towards combination therapy of immunoglobulins and vaccination. A problem in Belgium has been the availability of immunoglobulins, as was apparent during a recent out-

[a] Specific Hepatitis A immunoglobulins : Globuman Hepatite A I.M. amp. (200 IU/ml and 500 IU/ml) ; non-specific immunoglobulins are not available anymore in Belgium.

break of hepatitis A in a cooking school in Koksijde, where there was a shortage of immunoglobulins. The Viral Hepatitis Prevention Board (VHPB) makes the following recommendation. In countries where immunoglobulins are not routinely used after exposure or where immunoglobulins are unavailable, administration of hepatitis A vaccine can be considered for post-exposure prophylaxis and is likely to provide protection, based on animal studies (7) and outbreak control data (8,9).
B. Bell : There have been no randomized trials comparing the efficacy of hepatitis A vaccine to immune globulin after exposure.

5. Are the literature data sufficiently clear to advocate hepatitis A vaccination in unprotected patients with chronic liver disease regardless of the risk of exposure ?

B. Bell : The studies are not consistent on the risk of fulminant hepatitis A in chronic liver disease patients. Whether or not to vaccinate these people is the physician's individual decision,and depends on a number of considerations, including the risk of hepatitis A and the cost of the vaccine. In the United States, we do recommend hepatitis A vaccination for all patients with chronic liver disease (6).
P. Van Damme : As hepatitis A causes an additional inflammation in an already diseased liver, hepatitis A vaccination should be recommended for persons with a higher risk of adverse disease outcome, as persons with chronic liver disease, regardless of its aetiology (10).

Which hepatitis B prevention policy is most appropriate in patients with chronic liver disease :
- no prevention is necessary
- hepatitis B vaccine even if the risk of exposure is low
- first screen for hepatitis B status, vaccination to be considered when no immunity is present
- vaccination only to be considered when the risk of exposure is substantial (multiple partners, health care worker,...)

Comments

B. Bell : When taking the patient's history the potential risk of exposure to hepatitis B virus can be determined. Most adults with acute hepatitis B have recognized risk factors. So I would not vaccinate everybody with chronic liver disease for hepatitis B. I am personally less convinced about the data on the risk of hepatitis B in the setting of chronic liver disease.
N. Bourgeois : In the setting of chronic hepatitis C, the hepatitis B status is known in most of the cases.

Conclusions

- Hepatitis A vaccination in chronic liver disease : the best attitude is screening for hepatitis A immunity, especially in older people (in Belgium > 35 years of age) and in chronic hepatitis B patients due to intravenous drug use. Vaccination can be considered when no immunity is present. As the studies on the risk of fulminant hepatitis A in patients with chronic liver disease are not consistent, the physician should take a decision considering the available data when the risk of exposure is considered low. In many cases, however, no risk factors are apparent. CDC, WHO and VHPB recommend hepatitis A vaccination (6,11,12). It has to be taken into account that no refunding for hepatitis A vaccination exists in Belgium at this moment.
- The hepatitis B prevention policy by hepatitis B vaccination in patients with chronic liver disease can be limited to patients at risk of hepatitis B acquisition.

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