SCREENING FOR HEPATITIS C

RECOMMENDATIONS OF THE EXPERT COMMITTEE

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GUIDELINES

These guidelines cover who should be screened and how screening should be carried out.

I. INTRODUCTION

Infection with the hepatitis C virus (HCV) can only occur when the blood of an infected subject comes into contact with the blood of a person who does not have the disease. The main causes of infection are blood transfusion performed before 1992, and intravenous drug use.

However, contact with infected blood is possible in other situations. While there have been few confirmed cases of nosocomial infection, it may now be the second most common cause of infection in France after drug addiction. HCV transmission has been reported during haemodialysis, or after gastrointestinal endoscopy when equipment was not properly sterilised. Outside the hospital environment, practices that have led to infection include sharing drug preparation equipment without sharing syringes by intravenous drug users, or sharing straws by intranasal drug users. By extension, it is possible, yet unconfirmed, that infection could occur in other situations involving contact with infected blood. These situations would include other forms of endoscopy, surgery causing haemorrhage, intranasal drug use, tattooing, piercing, dental care, etc.

Mother to child transmission is rare unless there is concomitant HIV infection. Infection by a sexual route is theoretically possible in the event of contact with the blood of an infected partner, but it is probably unusual in France.

Finally, in 20% of cases, the circumstances under which infection takes place remain unknown.

Hepatitis C is a public health problem for the following reasons:
- there is a high prevalence of infection, which has been estimated at 1% in France;
- after infection, the disease progresses to a chronic state in 80% of cases, and active chronic hepatitis which may require treatment develops in approximately 50% of cases;
- active chronic hepatitis C may progress to cirrhosis and hepatocellular carcinoma.

Screening for hepatitis C is justified by:
- the high prevalence of infection and its potential morbidity;
- the harmlessness and acceptability of screening, which involves serodiagnosis requiring a single blood test only;
- the quality of the screening test, in terms of sensitivity and specificity;

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- the chronic nature of the disease which, at the very least, requires regular medical supervision to prevent complications;
- the possibility of preventing progression to a serious form of the disease, by routine dietary measures (giving up alcohol) and lifestyle measures (giving up drug use), and by the antiviral therapy which is indicated in active chronic hepatitis. Recent trials have shown that a combination of interferon and ribavirin eradicates the virus in 40% of patients treated. It is possible that new treatment strategies which will soon become available may be even more effective.

The above synopsis emphasises the severity of the disease and suggests that screening is desirable, but there are also a number of drawbacks:
- there is uncertainty about the real natural history of HCV infection. Most of the published studies have been carried out in hospital inpatients, who have the most severe forms of infection. However, a number of studies have reported high levels of spontaneous recovery or progress towards benign, chronic forms with minimal activity;
- experience of the efficacy of antiviral treatment is still recent, and this is particularly important as the treatment can have major side-effects;
- it has to be possible to provide an appropriate routine response when new cases are discovered. The medical strategy must not be limited to screening. There has to be a system for providing rapid and appropriate management for a person who has been found to have the disease, with the option of antiviral therapy if required. The system also needs to provide a response for the distress caused by discovering a previously asymptomatic chronic infection, particularly in forms where treatment is not justified;
- there is no information about the psychological and social consequences of a positive screening result;
- the further investigations currently performed (liver biopsy) as part of the management and treatment of patients may cause complications;
- there have been problems in France in carrying out targeted screening in populations which have been clearly identified as being at risk (subjects who received a blood transfusion before 1992, former intravenous drug users), as it has been estimated that approximately one-third of patients infected with HVC have still not been identified. In view of these problems, screening procedures need to be found which are effective within the populations that need to be screened.

A number of different problems have been encountered with targeted screening:
- hospitals have found it difficult to trace patients who received a blood transfusion before the introduction of an effective traceability system for blood product transfusions;
- there have been problems in contacting patients who have been identified by hospitals as having received a transfusion, particularly given the large number of patients lost to follow-up (moved away, died);
- patients might not have known they had received a transfusion before the introduction of compulsory notification of transfusions. This has made it difficult for general practitioners to identify patients who received transfusions;
- individuals who have experimented with intravenous drugs long ago and/or on rare occasions may have forgotten that they have done so or may refuse to remember;
- some active drug users are not managed within the care system;
- there are few general practitioners who routinely suggest screening to at-risk subjects over a long period of time;
- doctors are unaware of the factors that are thought to be risk factors.

All these issues need to be taken into account when proposing new guidelines on whom to screen and how to optimise screening.

II. WHO SHOULD BE SCREENED

Recommending routine screening for HVC in the general population does not appear to be justified. On the one hand, subjects at high risk of infection have been identified. Furthermore, an assessment of screening has shown that general screening is scarcely any more efficient than targeted screening, while its overall cost is out of all proportion to the cost of targeted screening. The recommendation for targeted screening is maintained.

II.1. Subjects who have been exposed to certain medical acts or who exhibit quantified and high levels of risk behaviour (prevalence > 2%)

These are:
- subjects who received stable blood products before 1988 or labile blood products before 1992 or a tissue, cell or organ graft before 1992. As it is not always known whether subjects received transfusions, it would be appropriate to screen for HVC in subjects who might have received transfusions because they received major medical or surgical treatment, i.e. major surgery, period in intensive care, difficult labour, gastrointestinal bleeding, etc. Special care needs to be taken in identifying subjects who might have received a transfusion because of neonatal or paediatric care, such as subjects who were extremely premature babies, children born with serious disease, history of exchange transfusion, etc;
- subjects who have used drugs intravenously at least once during their lifetime, irrespective of when they used them. In addition, drug users who are still active should be screened regularly;
- children born to HVC-seropositive mothers;
- patients on haemodialysis;
- subjects found to be seropositive for HIV.

II.2. Subjects having an exposure factor with an unquantified or low risk (prevalence < 2%)

These are:
- sexual partners of subjects infected with HVC;
- household members of infected patients, because of the risk of exposure to HVC through sharing objects soiled with blood (particularly personal hygiene items);
- subjects who are or have been in prison, because of the possible history of drug use and the possible risks related to promiscuity (e.g. sharing personal hygiene items);
- subjects who have been tattooed or pierced with non-disposable equipment;
- subjects who received mesotherapy performed without the use of disposable equipment or acupuncture performed without the use of personal needles or disposable needles;
- subjects found to have an elevated alanine aminotransferase (ALAT) concentration of unknown origin;
- subjects who come from or have received care in countries reputed or presumed to have a high prevalence of HVC (South-east Asia, Middle East, Africa, South America).

Health professionals should be screened if they have an accident involving exposure to blood, in accordance with the guidelines issued by the Direction Générale de la Santé (the French National Health Executive). At the present time, routine screening is not recommended in any other situations.

Subjects who underwent invasive procedures (endoscopy, surgery without transfusion, etc.) before universal disinfection measures were made compulsory in 1996 may have been infected, but this risk is not quantifiable and it is not possible to say whether it differs from the risk in the general population. It would not appear to be any more justified to recommend routine screening in these subjects than to recommend screening in the general population; the latter is not recommended.

III. SCREENING PROCEDURES

A systematic search of hospital medical records for subjects who received transfusions would make it possible to recall patients if the transfusion was performed before traceability measures were introduced (after the screening of blood donations for HVC became compulsory). However, this is both difficult and very time-consuming. Attempts made in France do not appear to have been very effective overall. This screening procedure is not recommended.

Screening proposed by treating doctors (e.g. gynaecologists, anaesthetists and paediatricians, as well as general practitioners) if risk factors are present, is recommended. This type of screening should not be carried out in isolation, as studies have shown that it is not very efficient (because of the small number of doctors actively involved and their involvement over a usually brief period of time). It could be reinforced by an extensive and prolonged advertising campaign aimed at the general public, inviting patients with identified risk factors to have themselves screened by their own doctor.

It is recommended that currently active drug users should be screened, and that screening should be repeated regularly in this group. Screening could be reinforced by reminders printed on the boxes used to collect needles, or by outreach work in places where drug users and other marginalised people live (information about viral diseases, how they are transmitted, how transmission can be prevented, and screening for these diseases).
There should be further evaluation of screening tests using saliva to see whether this procedure could replace blood tests and increase still further the acceptability of screening, mainly by active drug users who need to be screened regularly.