

Prevention and control of viral
hepatitis in France:
Lessons learnt and the way forward

VHPB meeting, Veyrier-du-Lac
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Objectives of the meeting

- Epidemiological update on viral hepatitis in France
- Overview of France's
 - ❖ infectious disease surveillance systems and adverse events following vaccination
 - ❖ viral hepatitis research activities
 - ❖ current prevention and control measures against viral hepatitis
- Lessons learnt from the French experience: successes, problems, barriers to overcome, and the way forward.

Preventive health-care system in France

- France is facing difficulties similar to other countries in sustaining high levels of health expenditures, with no guarantees of increased funding. This is due to an increasing ageing population, low birth rates, increasing levels of unemployment, and increased health costs for new therapies.
- Despite indicators showing a healthy French population, the situation contains some contradictions, e.g., a high rate of premature mortality and regional disparities.
- Decision-making within France's health-care administration is centralised at national level. However, a recently enacted law (August 2004) provides for implementation of decisions at a decentralised level.

Viral hepatitis research: organisation and funding

- France is one of the leading countries conducting fundamental research, with a long tradition of excellence in clinical research.
- Diverse sources of funding come from institutions, hepatitis-targeted projects, external grants, scholarships, and industry.
- At European level, hepatitis-targeted projects are funded through the 5th and 6th framework programmes of the European Commission.
- At the French level, the major source of funding is ANRS, now covering hepatitis C and more recently hepatitis B research.

Epidemiology of hepatitis B in France

- Incidence of hepatitis B infection in France is low. Nevertheless, there is a need to optimise the current strategy of prevention and vaccination.
- There is also a need for further epidemiological studies on HBV infection including data on chronic carriers.
- Preliminary results of the new surveillance system show that: (1) cases were mostly symptomatic and hospitalised, suggesting under-reporting; (2) prevention strategies in newborns of infected mothers should be reinforced; and (3) two thirds of cases could have been avoided through vaccination of at-risk groups.
- Challenges remain, such as reinforcing prevention strategies in infants and adolescents, and improving mandatory notification systems.

Epidemiology of hepatitis C in France

- In 1994 the estimated prevalence of HCV infection in France was 1.1%, meaning that half a million persons were HCV-infected.
- In 2004, although no new estimation is yet available, the prevalence is probably lower.
- Although HCV incidence has dramatically decreased, it remains a problem in injecting drug users.
- Older HCV-infected patients represent a great burden for reference centres, e.g., those in treatment failure, cirrhotics at risk of cancer and end-stage liver disease, and those in need of transplantation.
- A more accurate surveillance system would allow for better funding allocation.

Nosocomial HCV infections

- Notification has been mandatory since July 2001.
- Patient-to-patient HCV transmission can occur, for example, through haemodialysis, digestive endoscopy, anaesthesiology, transplantation, and surgery.
- The mechanism of patient-to-patient transmission is very often unknown. However, some ad hoc surveys allow the identification of mechanisms such as shared injection material and injection products, and breaches in hygiene measures.
- Health-care-related HCV infections remain underestimated.
- More efforts are needed to prevent blood-borne virus infections based on the findings of expert steering groups.

Hepatitis B and C registries

- A population-based registry is a structure that continuously records all new cases of a disease in a well-defined population. Registries also allow organising cooperative research studies.
- Registries are essential to:
 - study the epidemiology of diagnosed cases
 - monitoring epidemiological trends
 - evaluate the impact of screening campaigns and guidelines
 - evaluate health networks and their effectiveness
 - examine the natural history of hepatitis in the general population.

Hepatitis B immunisation policy in France

- Hepatitis B vaccines in France have been recommended by the CSHPF since 1994. The latest recommendations were made in March 2002.
- There is systematic immunisation of all children under 13 years of age, preferably infants, and risk groups.
- The immunisation policy is reviewed every year according to newly available vaccines, epidemiological situation, and WHO recommendations.
- Although vaccination policies have been agreed, infant and child vaccinations are not adequately implemented. The hexavalent vaccine, while available, is not reimbursed.

Data on hepatitis A in France

- Hepatitis A is not a reportable disease in France.
- The prevalence of anti-HAV antibodies in French military recruits has been decreasing from 1978 to 1987. This group is representative of the French male population, which corresponds to increased numbers in susceptible adults.
- Between 1999 and 2000, a pilot study was conducted to detect outbreaks, incidence and potential exposures. Participation of clinical laboratories was voluntary; at the same time, there was an insufficient number of participating laboratories, and a lack of capacity to identify clusters at district level. One positive aspect of this study was the willingness of the biologists to participate.

Surveillance programme for hepatitis B in France

- Because of the declining incidence of acute hepatitis B, passive reporting systems, such as the sentinel surveillance systems, are no longer adequate to detect the current incidence.
- A surveillance system was implemented in March 2003, involving direct reporting by biologists and clinicians to the district health office, which reports to the *Institut de Veille Sanitaire* (InVS).
- National reference centres for hepatitis B and C provide a regulatory basis for molecular epidemiological research and for surveillance in blood donors.

Surveillance programme for hepatitis C in France

- The aims of a hepatitis C surveillance programme is to provide data that allow evaluation of the national prevention programme and to adapt public health actions accordingly. Such a programme also serves as an alerting mechanism for intervention, and provides hypotheses for research.
- Surveillance systems:
 - Laboratory-based surveillance of HCV serology (screening).
 - Newly referred HCV-infected patients in hepatology reference centres.
 - Mandatory notification of nosocomial-related hepatitis C (or B).
 - Surveillance of residual risk in blood donors.
- In general, surveillance systems should be regarded as intelligence tools that allow rapid interaction with coordinating networks and partners.

Hepatitis E

- Hepatitis A and E viruses are both mainly transmitted through the faecal/oral route.
- Hepatitis E outbreaks occur in high endemic areas (e.g., Africa, Asia) and sporadic cases have also occurred in low-endemic areas (e.g., Europe, North America).
- Data from the French national reference centre for enterically transmitted hepatitis show decreasing anti-HEV seroprevalence and sporadic cases of acute hepatitis E.
- There is an animal reservoir of HEV but the link between the animal and human reservoir is not yet clear.

National strategy for prevention and control of HBV and HCV infection in France

- The general principles of the strategy are to combine the programme with other plans, to provide answers to patients' requests, to reduce regional disparity, and to reinforce the evaluation of the use of budgets and the impact of implemented measures.
- The strategy has three components: reducing the risk of HBV and HCV transmission, updating and reinforcing measures against hepatitis C, and implementing new and specific measures against hepatitis B.

National strategy for prevention and control of HBV and HCV infection in France, contd.

- Four major achievements of this national strategy are:
 - Primary prevention aimed at populations at highest risk
 - Nosocomial infection notification / prevention of risks related to tattooing and piercing
 - Increase of HCV testing
 - Improvement of access to care and treatment mainly in hospital services
- Research: in 1999, hepatitis C clinical research was committed to the ANRS; since 1999, 70 programmes have been financed; in 2004, the mission was extended to include hepatitis B and to fundamental research on hepatitis B and C.

Surveillance of adverse events following immunisation

- In France, there is no specific pharmacovigilance for vaccines, which are considered medical products.
- The current French pharmacovigilance system is a passive surveillance system, based on a decentralised collection and validation of safety data through regional centres and a centralised evaluation and decision-making process at the AFSSAPS.
- Reporting of adverse events is mandatory for prescribers and pharmacists.
- Its methodology is based mainly on medically confirmed case reports.
- It is involved in epidemiological studies and in informing the medical community on drug toxicity.

Prevention and residual risk of transfusion-transmitted viral infections (HIV, HCV, and HBV)

- Screening is one of the highly successful actions of France's national health programme
- Blood screening has been carried out in France for HBV, HIV, and HCV since 1971, the late 1980s, and 1990, respectively.
- Since 2001, NAT has been used as a research tool for HIV and HCV testing to minimise residual risk in blood and blood products.
- The benefits of NAT include the introduction of new methods in blood screening, a high level of blood component safety, and improvement in diagnosing infection in blood donors.
- It was decided not to implement HBV NAT in France due to its estimated limited impact. Moreover, the cost-efficacy ratio seems to be extremely high.