

Viral Hepatitis Prevention Board

Burden and prevention of hepatitis in Turkey

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Objectives

- Provide an overview of surveillance systems for infectious diseases
- Review the epidemiology of viral hepatitis in Turkey
- Give an overview of current measures to prevent and control viral hepatitis
- Discuss progress in prevention 10 years after the introduction of universal hepatitis B vaccination
- Review implementation of new prevention strategies, control measures and monitoring systems
- Discuss the way forward – lessons from success and possible obstacles

General observations

Country specificities:

- HBV vaccination introduced in 1998
- epidemiologically, geographically and culturally heterogeneous
- large, young population
- compulsory military service provides unique access to epidemiological data
- Screening tests for HIV and viral hepatitis for couples before marriage
- Blood banking system in midst of major reorganization
- Route for trafficking and drug transit

General observations

- Excellent progress being made in prevention and control of viral hepatitis
- Great interest in area, high-quality and considerable body of literature
- Good data, e.g. molecular epidemiology, but:
 - results are at an early stage for application in public health
 - lack of population-based data (first major study ongoing)
- Expertise, tools and networks available in islands of excellence
- Welcome participation of major parties: MoH, academe, hospital-based researchers, NGOs, but possibly not fully representative
- Mixed public-private health sector

Surveillance

New system introduced in 2005 (a "revolution")

- Builds on and improves previous electronic system
- Now covers 51 communicable diseases, including acute viral hepatitis
- Standardized case definitions and laboratory confirmation
- Sentinel surveillance for selected diseases introduced
- Guidance issued (including rationale for and types of surveillance)
- Dissemination of findings limited and delayed; annual publication

Epidemiology

Hepatitis A

- Most common acute viral hepatitis in children
- Intermediate endemicity at national level, but west/east gradient, highly endemic among young children in east/south-east
- All viruses genotype 1 (mostly 1B)
- Changing epidemiological pattern (including eating habits), with increasing numbers of susceptible people; poor sanitation remains an issue
- Migration and movement of people – important factors
- No immediate plans for universal vaccination, but vaccination of selected risk group and on basis of geographical distribution being considered

Epidemiology

Hepatitis B and D

- Leading cause of chronic hepatitis and hepatocellular carcinoma; main reason for liver transplants
- Most virus isolates genotypes D1 but genotype A1 and B reported
- Steady decline in prevalence but country remains with intermediate endemicity, and regional differences (west/east and south-east gradient)
- Decreases in HBsAg positivity in children, blood donors and health-care workers
- One estimate indicates 3 million people HBsAg positive and 300,000 with active hepatitis but only 30,000 under therapy

Epidemiology

- Hepatitis D still important although decreasing in prevalence
- Only genotype 1 detected so far
- Divergence in strains isolated

Epidemiology

Hepatitis C

- Most studies done on blood donors
- Gradual slow decrease in recent years (to 0.2-1.1%)
- West/east gradient seen in general population (0.17-2.8%) but not in blood donors; prevalence increases with age
- Significant decrease in haemodialysis patients
- Genotype 1 predominant, but type 2, 3 and 4 viruses detected; genotype distribution unchanged over years
- Main risk factors are low socioeconomic status, history of multiple blood transfusions, hospitalization and surgery; data on IDU lacking

Vaccination policies

- Hepatitis A – no policy
 - Consideration of decision to vaccinate against hepatitis A in relation to the assumption that infants in eastern Turkey are all infected in first year of life: This assumption should be verified as most children in these areas are protected during the first year of life through maternal anti-HAV antibodies (placental transfer)
 - Draw on other countries' experience
 - Vaccination may be justified - cost-effectiveness studies needed
- Hepatitis B – vaccine introduced in 1998 and policy revised in 2000:
 - Newborns and infants 0-11 months
 - Risk groups
 - Catch up for adolescents; all children up to age of 16 years have been targeted by the programme
 - Free for infants and risk groups
 - Birth dose introduced into immunization calendar; coverage data needed
 - Good infant coverage (>90%)
 - Data need for vaccination coverage of adolescents and adults at risk
 - Good prices negotiated with manufacturers and considerably expanded MoH budget for vaccination

Blood screening

- New law 2007 – transformation of organization to create regional blood banks, transfusion centres in hospitals and blood collection centres; improved screening tests (e.g. NAT) being considered
- No paid donation, all voluntary (family recruitment)
- Standardized donor assessment
- Majority of donors first time donors
- Decreasing rates of HBsAg (possibly due to better education, raised awareness and donor assessment) but steady rates of anti-HCV

Transplantation

- Some 400-500 liver transplants a year; data presented from one major centre only
- HBV and HDV main reason (two thirds) for liver transplants
- Post-transplant survival greatly improved for hepatitis B with HBIG and lamivudine prophylaxis; no consensus of dose or duration of treatment
- No major improvement in post-transplant survival of HCV-infected patients
- Advances in treatment (e.g. lamivudine + adefovir for HBV, and IFN/ribavirin for HCV)

Health-care workers

- High exposure rates, risks with surgery and for nurses
- Seroprevalence rates comparable to those in general healthy population and decreasing; increasing rate of vaccination
- Need for education, training in universal precautions, and vaccination
- No overall responsibility for occupational health, despite laws and international guidelines
- Need for decision-making process at ministry level
- Consideration should be given to screening and vaccination of all HCWs, starting with students
- Need resources to apply safe injection practices (WHO Safe Injection Global Network)

Lessons learnt and considerations

- Hepatitis A generally perceived as not serious
- Modest vaccination coverage can result in large decreases in incidence
- Hepatitis B: no evidence to change view that vaccine-escape mutants are a public health problem
- Hepatitis D: epidemiology follows that in other countries where D was a problem, declining as prevalence of B does (although reason not known); treatment difficult
- Epidemiological studies and standardized surveillance data are needed
- A large proportion (maybe as high as 90%) of patients with active chronic hepatitis are not being treated and many people probably do not know that they have a disease
- Health care available for chronic hepatitis
- Substantial knowledge base about viral mutants in chronic hepatitis patients and more information needed about implications for treatment
- Role of NGOs and patients' organizations
- Published literature on incidence or prevalence not representative at the national level

Lessons learnt and considerations

Hepatitis A

- overcoming social (including educational levels) obstacles and misconceptions
- Need for data on incidence and outcome of fulminant hepatitis A
- need for continuing improvements in sanitation
- competing priorities (other vaccine-preventable diseases, pandemic influenza etc)

Hepatitis B

- Continued evolution of guidelines for treatment of chronic hepatitis B
- Continuing need to reach health-care workers and other risk groups with vaccine
- Controversy about first-line treatment with lamivudine and whether to progress to more powerful drug; issues of resistance and cost

Hepatitis C

- Resolve issue about whether decision to treat depends on degree of fibrosis

Lessons learnt and considerations

Quest for data generation seems to come from academics

Molecular epidemiological data limited

Donor screening stated to be effective

Lack of W/E gradient in HCV prevalence in blood donors indicates that screening procedures are effective

Markov modelling valid and useful provided that input data are of assured quality

Needs and proposed steps forward

- Improve access to collected data and results of analyses, with feedback to field workers and the public
- Data need to be representative, validated, and form the basis for public health action
- Calculate disease burdens from data already collected and use in modelling exercises
- Monitor disease trends over time
- Identify risk factors, including proportional contribution (attributable fraction)
- Include chronic viral hepatitis as a separate entity for surveillance
- Evaluate the surveillance system and adjust as necessary

Needs and proposed steps forward

- Capacity building (surveillance, care, treatment, occupational health, and other areas)
- Strengthening of evidence-based decision-making and processes for allocation of resources using data
- Evaluation of the effectiveness of public health interventions (vaccination, screening, injection safety, infection control, promotion of safer sex, counselling and treatment) and revision of programmes accordingly
- Hepatitis A: consideration may be given to long-term goal of vaccinating all young children at or after age of one year
- Greater insight into IDU – more studies

Needs and proposed steps forward

- Hepatitis B: consider expanding screening of adults in order to identify people in need of treatment
- Hepatitis B and C:
 - comparative data for different groups of health-care workers needed
- Blood banks: evaluate introducing NAT screening (automation could yield savings) which could reduce transmission of HBV further
- Need to increase number of regular repeat volunteer blood donors

Recommendations

- Strengthen epidemiology (e.g. determine attributable fractions, aggregated data) and use surveillance data as basis for a national plan of action
- Better communication and networking between leading academic and public health institutions
- Improve planning and control of risks in health-care settings, given that risks are recognized
- Build up the public health aspects with a focus on control, including NGO-government liaison as in the area of work against trafficking
- Consider policy options for use of hepatitis A vaccine

Recommendations

- Mandatory screening and vaccination of health-care workers, preferably before they start their education
- High-level coordination of programmes and projects to prevent and control viral hepatitis; consider creation of a task force, at ministry level, composed of all national stakeholders
- Prepare a comprehensive national strategy and plan for the prevention and control of viral hepatitis, including the goal of controlling hepatitis B, in coordination with all interested parties