HEPATITIS IN RISK GROUPS IN ROMANIA

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Drug users - particularly PWID are at risk of acquiring blood borne viral infections through sharing of drug use material and through unprotected sex.

**HCV, HIV, HBV PREVALENCE IN PWID**

- **Western Europe**: HCV 53.2, HBV 3.2, HIV 4.5
- **Eastern Europe**: HCV 64.7, HBV 7.9, HIV 24.7
- **Romania**: HCV 83.8, HBV 5.2, HIV 20.5

IDU PROFILE

- 88.8% young males: mean age: 27±7.2 ys
- 78.2% unemployed without health insurance
- 57% low level of education

Integrated medical-social interventions-ID papers, accessibility of medical care

Education: Lack of knowledge/concern for its own infection status

- 17% CSW
- 13.9% homeless

Data source: National Antidrug Agency
Disruptions in the harm reduction services- Interruption in needle exchange programs

HRS- funded by UNDOC, Global Fund to Fight HIV/AIDS, TB and Malaria until 2010

Changes in the drug market- Transition from heroin to NPS - new psychotropic substances- amphetamine type stimulants

- Low price, broad accessibility- „legal highs” until 2012
- No substitution therapy available
- Higher injection frequency- 6-10 injections/day NPS vs 3-5 times/day for heroin
- High risk behaviour – syringe sharing, unprotected sex
CONSEQUENCES:

1. Increase in the estimated number of PWID from 17,000 in 2008 to >20,000 in 2011

2. Increase in the number of hospitalised PWID with severe bacterial infections / increased liver enzymes

Victor Babes Hospital of Infectious diseases

- 139 PWID 2007-2009
- 842 PWID 2010-2013
3. Outbreak of HIV infections in PWID

**Prevalence in OST**

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<th>HBV</th>
<th>HIV</th>
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**Opioid Substitution Therapy**

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**Prevalence BSS**

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**Behavioural Surveillance Study**

Data source: National Antidrug Agency
HIV EPIDEMIC IN ROMANIA

HIV transmission ways in adults
cumulative 1985-2010

Data source: National Anti AIDS Commission
Victor Babes Hospital of Infectious diseases
139 PWID 2007-2009 vs 842 IDU -2010-2013

842 IDUs admitted 2010-2013
53.5 % HIV INFECTED
92.8% HCV co-infected
31.4% HBV co-infected
HEPATITIS COINFECTIONS IN HIV INFECTED ADULTS

HBV
HCV
HBV HCV

Data source: National Anti AIDS Commission

Behavioural surveillance study
70% PWID are in networks of PWID:
34% 1-10; 24% 10-20; 12.6% >50 PWID

Data source: National Anti Drug Agency
Phylogenetic analysis-
New subtypes and local HCV transmission networks in Romania

**HCV Genotypes - general population**

- 1b: 93%
- 1a: 5%
- 3a: 1%
- 4: 1%

**HCV Genotypes - IDUs**

- 1b: 50%
- 1a: 23.1%
- 3a: 7.7%
- 4: 11.5%

**IDU - a vector for the introduction of new HCV genotypes**

Phylogenetic tree in core region for HCV 1a strains isolated from PWID

Low genetic distance - recent introduction and clustering

HIV1 SUBTYPES IN IDUs

Continous monitoring of the epidemic
2.12 millions Romanian- migrants in the EU, most have settled in Italy (888,000), Spain (823,000), Portugal

2010-11

2012-2013
Phylogenetic analysis - New subtypes and local HIV transmission networks in Romania

81% of the available sequences clustered with at least one other sequence

All the individuals that form the transmission clusters admit sharing or reusing needles frequently

HCV seems to preceed HIV infection, limited number of concomitant transmissions

NEP: NGOs; <<pharmacies
Access to treatment very difficult, Very low adherence
Approval of DAA therapies?
Genotype/subtype determination – important clinical consequences
- progression of liver disease
- emergence of RAV
HIV EPIDEMIC IN ROMANIA

LONG TERM SURVIVORS - Young adults parenterally infected with HIV during childhood

- actual age
- age at diagnosis

HEPATITIS COINFECTION IN HIV INFECTED CHILDREN

- children HBV
- children HCV
- children HBV HCV

HBV coinfections
HIV- HBV COINFECTIONS:
Long term HIV survivors, Multi-treatment exposed
Long term evolution of (perinatally acquired?) HBV coinfection
250 long term survivors HIV infected patients

Prevalence of HBV markers

- HBV DNA: 5.4
- HBeAg: 4.8
- anti HBs: 22
- HBsAg: 31.2
- anti Hbc: 64.5

- 48% males
- Median age: 24 years
- Median duration of HIV infection: 17 ys
- Median time on cART: 12 years
- Median HIV viral load: 2.17 $\log_{10}$ copies/mL
- Median CD4 count: 481 cells/mm3

- High proportion of chronic HBsAg carriers
- A low percentage of long term HIV/HBV coinfected patients with active liver disease
- No clinical signs of hepatitis

HIV/HBV coinfected patients

Most coinfected individuals show no signs of severe liver fibrosis

The number and type of ARV regimens and the cumulative exposure to potentially hepatotoxic ARV did not influence the presence of fibrosis

ART therapy - important role in delaying progression of liver disease in HIV/HBV coinfected patients

97.7% of the patients were currently treated with a regimen including a dual HIV/HBV active ART (96.9% -3TC; 29%- TDF)

Tenofovir-containing cART is preferred for HIV-HBV coinfection, better resistance profile
Profile of PWID –
High seroprevalence of HCV monoinfections
Increase in the number of HIV-HCV & HIV- HCV- HBV coinfections
Emergence of distinct subtypes and multiple interconnected clusters, suggesting local transmission networks

Profile PLWH-
Young adults – long term HBV coinfection - maintain an inactive hepatic disease under cART

Young adults recently coinfected with HCV through IDU with limited access to therapy
Inter-twinned epidemics of viral hepatitis and HIV infections in Romania
Sustainable risk-reduction interventions (VCT, NEP, OST) are necessary to avoid an escalation of new infections

There is an urgent need for a continuum of care: testing- referral- treatment- monitoring

“You must run faster and faster
Just to stay in the same place....”

The Red Queen Principle
Lewis Carroll- Alice in the wonderland
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