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AUDITORIUM, MINISTRY OF HEALTH

EACS European AIDS Clinical Society MEETING

"STANDARD of CARE for HIV and COINFECTIONS in EUROPE"

Chairs: A. Antinori, A. d’Arminio Monforte, C. Mussini
Epidemiology of HIV infection in Europe

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MRC Clinical Trials Unit at University College London
Natural course- no intervention

• Steady loss of CD4+ cells (~50-80/ year)
• Initial surge in viraemia, VL sets, steadily rising thereafter (0.1 log/ year)
• Men have higher VL and lower CD4 than women with same HIV infection duration
• MSM have consistently higher VL
• Median survival 10-12 years- dependent on age (and little else)
Estimated HIV survival 1979-96

By age at seroconversion

- <5 years
- 5–14 years
- 15–24 years
- 25–34 years
- 35–44 years
- 45–54 years
- 55–64 years
- ≥65 years

Years from seroconversion

CASCADE *Lancet* 2000
Estimated mean (95% CI) CD4 cell count

Estimated mean (95% CI) log HIV RNA

Years since seroconversion

CD4

HIV RNA

Touloumi et al AIDS 2004
Mean HIV-RNA trajectories by sex and exposure group

Touloumi et al AIDS 2004
Changes in HIV virulence?

Changes in CD4 cell count at SC

Changes in viral load set-point

Time to needing ART halved

44% increase in virus transmissibility

Pantazis et al Lancet HIV 2014
Elite control

http://www.plosone.org/article/info:doi/10.1371/journal.pone.0086719
CD4 at SC and viral set-point by subtype

Touloumi et al. CID 2013
Global distribution of HIV subtypes

Hemelaar et al AIDS 2011
WHO European Region
Migration - last 30 years

Flows from the CIS to Russia

Flows from Central and Eastern Europe to Western Europe
HIV infections reported per 100,000 population, 2010
People living with HIV: fast growing numbers in Eastern region

Europe (total estimated)
2.4 million
[2.1 million – 2.7 million]

Eastern Europe and central Asia
1.5 million
[1.3 million – 1.8 million]

Western and central Europe
860 000
[780 000 – 960 000]

Estimated number of people living with HIV in Europe, 1990-2011

Donoghoe 2012
HIV epidemic: eastern European region

- More recent epidemic, HIV prevalence 0.8% (0.2% in W & C)
- Of all new cases of HIV in Europe in 2010, 76% were in Eastern Europe
- 77% of new HIV diagnoses in women in Europe in 2006-2010 occurred in Eastern Europe
- 90% of new HIV cases are in Ukraine & Russia
- Only region in world with rising HIV incidence
HIV exposure categories by sub-region

In Eastern Europe, 90,190 new HIV cases were reported in 2010, of which 43% in IDUs.

In Western Europe, 28,137 new HIV cases were reported, of which 4% in IDUs.

Heterosexual transmission predominates in West
Epidemic in the East is IDU-driven

Platt et al 2013
HIV and IDU in Eastern Europe

- Extremely high rates of IDU
- Drug trafficking, social changes
- Russia has 1.5-3.0 million drug users
- Ineffective / insufficient harm reduction
- Around 25-35% IDUs are women

HIV prevalence among IDUs, 2006-10

Platt et al 2013
“Best estimates” HIV prevalence among PWID, 2006-10

Russia = 29% (range 7%, 61%)

Ukraine = 23% (range 4%, 80%)

Platt et al 2013
HIV among pregnant women

Russia

- 8 regions have prevalence >1%
- ~11,000 women with HIV delivering each year

Data courtesy of Inga Latysheva

Ukraine

- Antenatal HIV prevalence ~0.5% ; 3% in some regions
- ~4,000 women with HIV delivering annually
Thank you!

• Anastasia Pharris- ECDC
• Claire Thorne- UCL
• Martin Donoghe- WHO