



Low Prevalence of HIV-1 and HIV-2 Co-infection in Pregnant Women in Bissau: Are the Two Epidemics Independent?

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GUINEA BISSAU - WEST AFRICA

- Life expectancy at birth: 47 years
- Literacy over 15 years old: 42,4%
- Gross domestic income per capita: \$160
- Yearly health expenditure per capita \$ 21
- Birth rate 37,65 ‰
- Mortality (<5 years old): 203 ‰
- Child mortality : 125 ‰
- Malnutrition <5 aa: 25%





Background

HIV-1 and HIV-2 highly prevalent in Guinea Bissau
HIV-1 prevalence is increasing
HIV-2 reported to decline.

Aim

to analyse the correlates of risk of presenting HIV-1 and/or HIV-2 infection in a large population of pregnant women living in Bissau and surroundings.

Methods



January 2002 - June 2006

23,869 pregnant women (attending ten ANCs in Bissau) counseled and tested for HIV-1/HIV-2.

HIV-testing:

- screening tests: Capillus HIV-1/HIV/2 (Cambridge Biotechnology, Galway, Ireland) and Genie II HIV-1&2 (BioRad Laboratories Redmond Washington, USA)
- confirmation assay: ELISA (BioRad Laboratories Redmond Washington, USA)



The analysis of trends for seropositivity were performed by means of Cochran-Armitage test for trend

Differences in HIV prevalence between categorical variables were tested by Pearson chi-square statistic.

Factors associated with HIV seropositivity were determined by multivariable logistic regression models



Results

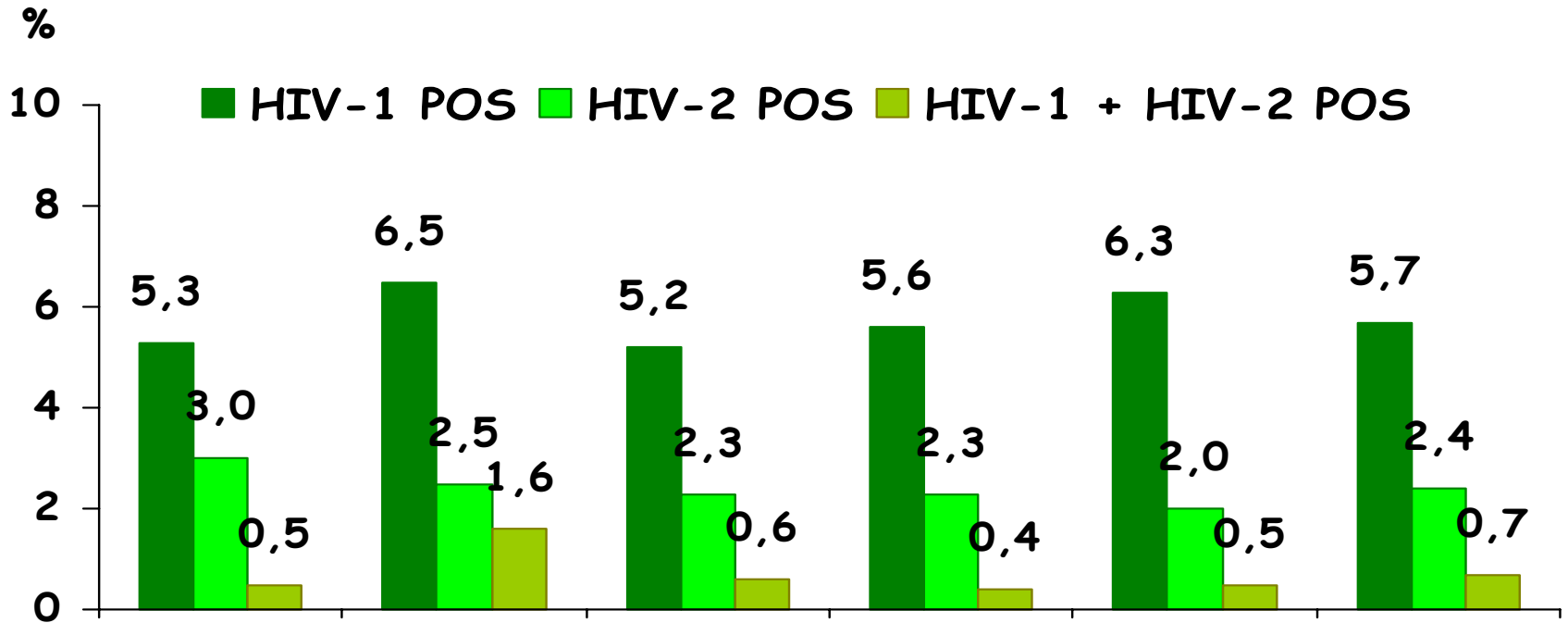
Prevalence of HIV-2: 3.0% in 2002 to 2.0% in 2006
($p=0.0063$)

Prevalence of HIV-1: 5.3% in 2002 to 6.3% in 2006

Co-infection remained low and stable
(0.6% in 2002, 0.5% in 2006)



2003-2006 prevalence of HIV-1 and HIV-2 in pregnant women in Guinea-Bissau: significant decrease of HIV-2 infection trend (Cochrane - Armitage trend test, $p = 0.0063$), no significant variation for HIV-1 and for the co-infection



Year	2002	2003	2004	2005	2006	Total
Tested women	3670	5141	5982	6558	2518	23869
HIV-1 pos	193	335	310	364	158	1360
HIV-2 pos	110	131	135	148	51	575
HIV-1 + HIV-2 pos	17	80	36	25	12	170



Conclusions

- Sexual exposure is involved in the risk of acquiring both HIV-1 and HIV-2 infection
- Different trend of HIV-1 e HIV-2 infections
➡ different efficiency of sexual transmission
- Co-infection remains restricted to a minority of cases ➡ existence of two clearly separate epidemics with limited overlapping
- HIV-2 is declining ➡ consequence of the reduction of the impact of parenteral risk factors ??



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