

## Poster 226 - Sexual HIV Post-Exposure Prophylaxis (PEP) in France

F. LOT, C. LARSEN, V. BAUM-PARMENTIER and A. LAPORTE  
12, rue du Val d'Osne Institut de Veille Sanitaire 94415 Saint-Maurice cedex, France  
Tel: 33.1.41.79.67.46 Fax: 33.1.41.79.67.66 Email: f.lot@invs.sante.fr

### Introduction

In France, official recommendations for PEP were extended in April 1998 to include non-occupational exposures and particularly sexual exposures (following condom breakage or unprotected intercourse).

**PEP**, based on a 3-drug regimen, **is offered for** any anal or vaginal intercourse with a known HIV-positive source or at increased risk of infection (e.g. injecting drug users, men who have sex with men).

**PEP can be offered for** any anal or vaginal intercourse with an unknown HIV status source and for any oral sex with a source known to be HIV-positive or at increased risk **in case** of high risk factors of HIV transmission (high infectivity of the source partner, sexually transmitted diseases, traumatic sexual intercourse or menstruation).

**PEP is not offered** for oral sex with an unknown serostatus source.

### Objectives and Methods

A national surveillance for non-occupational and occupational HIV exposures has been set up in July 1999.

The surveillance objectives are:

- to determine the characteristics of persons seeking advice for PEP
- to evaluate use, toxicity of PEP and compliance of treated persons
- to assess serological follow-up

Guidelines for risk assessment and PEP prescription, standardized forms for inclusion and follow-up at 1, 3 and 6 months and information pamphlets for exposed persons were provided to all hospital departments dispensing PEP (emergency and infectious diseases departments).

Routes of sexual exposure were classified in 5 groups according to the magnitude of the risk of HIV-transmission: receptive anal sex, receptive vaginal sex, insertive anal or vaginal sex, oral sex and others. In case of more than one sexual practice, the risk of transmission is considered as being higher.

## Results

Between July 1999 and May 2000, 1 292 sexual exposures were reported (70% of non-occupational exposures).

### 1. Characteristics of the 1292 exposed persons having sought advice

<b>Gender</b>	Male	771	60%
	Female	521	40%
<b>Median age [range]</b>		29,0	[10-79]
<b>Time elapsed between exposure and medical advice</b>	<1 hr	24	2%
	1 – 4 hrs	144	11%
	4 – 24 hrs	576	45%
	24 – 48 hrs	272	21%
	>48 hrs	126	10%
	unknown	150	11%
<b>Mode of exposure</b>	heterosexual	857	66%
	homosexual	435	34%
<b>HIV status of source (after determination when possible)</b>	positive	316	24%
	unknown	862	67%
	negative	114	9%

277 (21%) sexual assaults were reported and concerned 254 heterosexual exposures and 23 homosexual exposures.

### 2. Use of PEP

#### Characteristics of sexual exposures and PEP prescription

Route of exposure	N	Unprotected sex (sexual assaults excluded)	PEP prescription for 1 month*	Regimen	
				triple	double
Receptive anal	268	42%	87%	86%	12%
Receptive vaginal	426	39%	79%	77%	21%
Insertive anal or vaginal	469	34%	70%	81%	17%
Oral sex	85	93%	65%	71%	29%
Other	44	44%	70%	87%	13%
<b>Total</b>	1 292	41%	76%	81%	18%

\*Excluded PEP interruption because of a HIV-negative source

PEP was prescribed in 76% of the sexually exposed persons.

**PEP prescription according to HIV status of source (after determination when possible) and route of exposure**

Route of exposure	HIV status of source					
	positive		unknown		negative	
	total	% PEP	total	% PEP	total	% PEP
Receptive anal	59	95%	194	87%	15	53%
Receptive vaginal	91	89%	288	85%	47	19%
Insertive anal or vaginal	129	87%	290	72%	50	14%
Oral sex	20	70%	65	63%	0	0%
<b>Total *</b>	<b>316</b>	<b>87%</b>	<b>862</b>	<b>79%</b>	<b>114</b>	<b>21%</b>

\* including unknown routes of exposure

In case of unknown HIV status source, factors which are known to increase the risk of HIV transmission such as traumatic sexual intercourse, sexually transmitted diseases or menstruation did not change the prescription rate: 79% if no risk factor vs. 80% if one risk factor. As most of these factors are difficult to point up, sexual assault was the only determining factor for PEP prescription (87% vs. 73%; p<0.001).

In case of HIV-positive sexual partner, the prescription rate for PEP was not affected by the viral load: 90% if <200 copies/ml vs. 87% if >200 copies/ml.

**Drug regimen prescribed**

<b>2 drugs</b>	<b>173</b>	<b>18%</b>
Zidovudine+lamivudine	163	
other	10	
<b>3 drugs (PI)</b>	<b>749</b>	<b>76%</b>
Nelfinavir	442	
Indinavir	307	
<b>3 drugs (NNRTI)</b>	<b>35</b>	<b>6%</b>
Nevirapine	24	
Efavirenz	9	
Delavirdine	2	
<b>4 drugs</b>	<b>14</b>	
<b>other</b>	<b>9</b>	
<b>Total prescribed</b>	<b>980</b>	

### 3. Toxicity of PEP

Follow-up at 1 month was available for 400 (41%) treated persons.  
PEP was completed in 332 (83%) whatever the regimen prescribed (2 or 3 drugs).

#### Adverse symptoms by regimen

Regimen	general	digestive	neurological	rash	other	Total
<b>2 drugs</b> <b>N = 56</b>	23%	36%	7%	4%	11%	52%
<b>3 drugs (PI)</b> <b>N = 319</b>	38%	66%	9%	4%	9% ¥	74%
<b>3 drugs (NNRTI)</b> <b>N = 16</b>	25%	19%	13%	6%	6%	38%
<b>4 drugs</b> <b>N = 8</b>	63%	75%	0	0	0	75%
<b>Total</b> <b>N = 400*</b>	36%	60%	9%	5% §	11%	70%

General: headache, fever, fatigue, insomnia, malaise, oedema, muscular pains

Digestive: nausea, vomiting, anorexia, diarrhoea, and abdominal pains

Neurologic: vertigo, paresthesia, mood disorders

\* Regimen is unknown for 1 case

¥ Included 6 cases of nephrolithiasis with indinavir of which 4 were severe.

§ Among the 18 rash observed, 5 were severe and linked to IP

#### Biological abnormalities by regimen

Regimen	hepatic	pancreatic	hematological	dyslipidemia	other	Total
<b>2 drugs</b> <b>N = 56</b>	2%	2%	5%	0%	0%	9%
<b>3 drugs (PI)</b> <b>N = 319</b>	7%	1%	2%	1%	3%	11%
<b>3 drugs (NNRTI)</b> <b>N = 16</b>	13%	0%	0%	0%	0%	13%
<b>4 drugs</b> <b>N = 8</b>	0%	13%	0	13%	0	13%
<b>Total</b> <b>N = 400*</b>	6%	1%	2%	1%	2%	11%

Hepatic: elevation in ALT or AST, in GGT, in bilirubine

Hematological: anemia, leuconetropenia, thrombocytopenia

Dyslipidemia: hypertriglyceridemia, hypercholesterolemia

Regimen is unknown for 1 case

Adverse symptoms or biological abnormalities led to premature discontinuation of treatment in 10% of cases.

#### **4. Serological follow-up**

Follow-up at 3 months is available for only 17% of persons exposed to an HIV positive source or an unknown source. No seroconversion was reported.

#### **Discussion**

During the period studied (11 months), nearly 1300 persons attended emergency or infectious diseases units for PEP after sexual exposure in a hundred hospitals. Of these, 65% sought advice within the first 24 hrs and 90% within the first 48 hrs, which is satisfactory regarding the preventive effect of PEP.

Heterosexual mode of exposure was involved in 2/3 of the cases and men having sex with men in 1/3. Sexual assaults were frequent representing 30% of the heterosexual exposures. These figures do not allow us to assess the accessibility of the targeted persons to this management prophylactic system.

PEP was frequently prescribed (76%) although the status of source remained unknown in 67%.

In case of unknown status source and oral sex exposure, the rate of PEP prescription was quite high (63%). According to the recommendations this was the only situation where PEP did not have to be proposed.

Except for sexual assaults, the existence of transmission factors is often unknown to the exposed person and the physician. This is why it is of no use for prescription decision and the rate of prescription for anal or vaginal sex with an unknown source status is still high.

According to recommendations, the most often prescribed PEP was a 3-drug regimen including a protease inhibitor.

When treatment follow-up was available, PEP was completed in 83%.

Side effects were frequently reported but could be overestimated; the persons developing side effects are more likely to come back for medical advice.

However some severe effects incline to be cautious.

Clinical and serological follow-ups were often not performed. It is important to find means to improve the information provided to the exposed persons regarding the necessity of a follow-up.

#### **Conclusion**

The recommendations prompt physicians to prescribe widely especially when the status of source is unknown and with no identified transmission factor.

Because drug combinations prescribed involved frequent adverse effects, which were sometimes severe, the recommendations should be revised.

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