

# Acute hepatitis C in HIV-infected men who have sex with men in France in 2006 and 2007

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## Background

In Western European countries, incidence of hepatitis C virus (HCV) infection remained very low among cohorts of HIV-infected (HIV+) men who have sex with men (MSM) until 2000.

Since 2001, cases of acute hepatitis C among HIV+ MSM possibly linked to sexual practices have been reported.

To better understand the transmission dynamics of HCV emergence among HIV+ MSM, we undertook a prospective study to depict clinical and epidemiological characteristics of acute HCV infection in HIV+ MSM and to describe their social and behavioral profiles. Preliminary results are presented.

## Methods

- A random and proportional probability sample of 100 medical wards was drawn according to the number of HIV and AIDS cases in MSM reported since 2003 to the National HIV surveillance system.
- A confirmed case of acute HCV was defined by a positive anti-HCV antibody (Ab) within one year of a documented negative anti-HCV Ab or a positive HCV RNA within one year of documented negative anti-HCV Ab and HCV RNA.
- A possible case of acute HCV was defined by the occurrence of positive HCV RNA associated with clinical and biological (elevated ALT) signs of hepatitis and negative HCV Ab within one year of regular and normal ALT level or of a documented negative HCV RNA.
- A case of HCV re-infection was included if elevated ALT and positivation of HCV RNA were diagnosed within one year after subsequent negative ones.
- Information was collected on socio-demographics, clinical and biological details on HCV and HIV infections, HBV markers and HCV risk factors prior to HCV diagnosis.
- Two types of questionnaires were completed: one by physicians on clinical data and HCV risk factors and one (self-administered) by patients on sexual behavior, HCV risk factors and HCV exposures.

## Results

- Between January 2006 and September 2007.
- 70 acute HCV were notified by 25 wards (0 case in 32 wards; no data in 43).
- 50 patients having acute HCV were diagnosed in 2006 and 20 in 2007.
- 10 (14%) patients refused to participate; for 7 (10%), consent was pending.
- 53 (76%) patients, for whom physicians completed clinical data, were included (tables 1 to 3).
- 36 /53 patients completed the questionnaire (tables 4 to 5):
  - 31/36 (86%) were at least, bachelor's level: 6 (17%) have a master and 11 (31%) a PhD.

**TABEAU 1** MEDIAN AGE AT DIAGNOSIS AND MEDIAN TIME BETWEEN HCV AND HIV DIAGNOSIS AMONG HIV+ MSM WITH ACUTE HCV INFECTION, FRANCE, 2006-2007

N = 53	years	[min ; max]
Age at HCV diagnosis	39	[26 ; 58]
Age at HIV diagnosis	30	[20 ; 58]
Time between HIV and HCV diagnosis	9	[0 ; 22]

**TABEAU 2** CHARACTERISTICS OF ACUTE HCV AMONG HIV+ MSM, FRANCE, 2006-2007

N = 53	N	%
<b>Region of diagnosis</b>		
Paris area	36	68
Other regions	17	32
<b>Circumstances of diagnosis<sup>s</sup></b>		
systematic HCV-testing	6	11
symptoms (jaundice, asthenia)	12	23
behavior at risk	17	32
elevated ALT	42	79
<b>ALT at HCV diagnosis</b>		
< 3N <sup>#</sup>	11	21
3N-5N	11	21
> 5N-10N	7	13
> 10N	21	40
missing	3	5
<b>Acute HCV diagnosis<sup>s</sup></b>		
confirmed	43	81
possible	7	13
re-infection	3	6
<b>Genotype*</b>		
1	10	21
3	7	14
4	32	65

<sup>s</sup>several possible answers; <sup>#</sup>upper normal value; <sup>s</sup>within 1 year; \*missing for 4 patients

**TABEAU 3** CHARACTERISTICS OF HIV INFECTION AMONG MSM WITH ACUTE HCV, FRANCE, 2006-2007

N = 53	N	%
<b>HIV clinical stage</b>		
Primary infection	2	4
Asymptomatic	36	68
Symptomatic	8	15
AIDS	6	11
missing	1	2
<b>CD4 cell count/mm<sup>3</sup></b>		
≥ 350	43	81
< 350	9	17
missing	1	2
<b>HIV viral load</b>		
undetectable with HAART*	28	53
detectable with HAART*	8	15
detectable, no HAART**	16	30
missing	1	2

\*highly active antiretroviral therapy; \*\*2 patients on treatment interruption

**TABEAU 4** HCV RISK FACTORS AND EXPOSURES IN THE SIX MONTH PRECEDING HCV DIAGNOSIS IN HIV+ MSM, FRANCE, 2006-2007

N = 36 completed self administered questionnaires	N	%*
Tattoo / piercing	6	17
Endoscopies / surgery	8	22
IV drug use	0	0
Nasal drug use	14	39

\*several possible answers

**TABEAU 5** SEXUAL PRACTICES AND SEXUALLY TRANSMITTED INFECTIONS IN THE SIX MONTH PRECEDING HCV DIAGNOSIS IN HIV+ MSM, FRANCE, 2006-2007

N = 36 completed self administered questionnaires	N	%
<b>Median number of sexual partners [min; max]</b>	20 [0 ; 170]	
<b>At least one sexually transmitted infection*</b>	24	67
<b>Having sex under psychoactive / psychedelic drug<sup>s</sup></b>	16	44
<b>Having sex under cocaine</b>	15	42
<b>Having sex under Gamma-Hydroxybutyrate (sedative)</b>	14	39
<b>Erectile dysfunction pill use (e.g. Viagra®)</b>	11	31
<b>At least one occasional sexual partner</b>	33	
<b>Sexual practices with occasional partners<sup>s</sup></b>		
unprotected anal sex	29	91
fisting	18	54
BDSM <sup>#</sup>	15	45
bleeding during sexual practices	14	42

\*anal Chlamydia / LGV: 12; syphilis: 11; gonorrhoea: 5; genital herpes: 4

<sup>s</sup>e.g. ketamine, amphetamine, ecstasy <sup>s</sup>several possible answers

<sup>#</sup>bondage, discipline, sadism, masochism

## Conclusion

HIV+ MSM who presented an acute HCV infection in 2006 or 2007 in France:

- were followed up for a well stabilized HIV infection under HAART,
- reported no intravenous but recreational drug use during sex,
- experienced numerous unprotective sexual practices with multiple partners and frequent visible bleeding, revealing a failure in HIV prevention counselling and a risk of HCV sexual transmission.

Predominant genotype 4 suggests a possible cluster that phylogenetic analysis will characterize.

This study will provide an estimate of the incidence in this population and appreciate the dynamic of the outbreak.

