

Increase of sexually transmitted hepatitis C virus in HIV+ men who have sex with men in Barcelona, Spain. A problem linked to HIV infection?

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INTRODUCTION

- Increase of acute hepatitis C virus (HCV) infections reported amongst men who have sex with men (MSM) in the last decade
- Europe, North America and Australia
- Higher incidence in HIV+ cases (also more follow up)

Outbreak notification:

- January 2013 → an increase in the number of HCV infections among MSM was observed in Barcelona

OBJECTIVES

The main objective is to analyze the increase of HCV cases in MSM in Barcelona.

Secondary objectives are:

- to describe the HCV incidence from 2007 to 2013
- to analyze risk exposures amongst HCV cases in 18-59 old men in Barcelona
- to analyze the demographic and clinical characteristics of cases MSM and their risk practices

METHODS

Source of information:

Cases notified to the Public Health Agency of Barcelona by hospitals and other health care centers.

Retrospective and active search of cases since 2012

General epidemiological surveys & focused interviews

STATISTICAL ANALYSES I

Evolution from 2007 to 2013 of acute HCV incidence per 100.000 inhabitants, total and according to sex

Among HCV cases in men 18-59

(Periods 2007-2011 vs 2012-2013)

- Mean age (DE), country of origin (N[%])
- Risk exposure in last 6 months (N[%]) → sexual (MSM) and non-sexual. Non sexual classified as:

- Intravenous drug use
- Surgery, invasive treatments, diagnostic tests
- Others, tattoos, piercings and acupuncture

STATISTICAL ANALYSES II

Among cases → MSM-HCV outbreak (2012-2013)

Distribution (N[%]) according to:

- trimester and year
- clinical symptoms of acute hepatitis
- age group (18-24; 25-34; 35-44; 45-54; >54)
- years between HIV-HCV infection (<1; 1-2; 3-5; 6-10; 11-15; > 15)

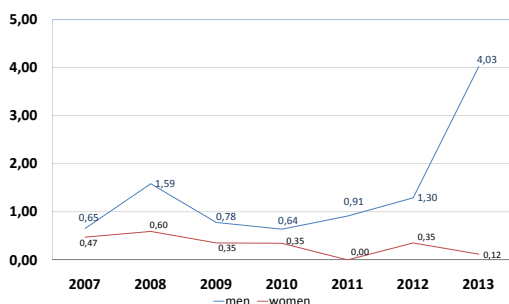
Sexual risk practices were also analysed (e.g fisting, unprotected sex) (N[%])

LABORATORY ANALYSES

- High resolution HCV subtyping with massive sequencing by using 454/GS-Junior platform
- Preliminary phylogenetic → study of E2PePhD highly variable region and NS5B to assess any associations amongst cases

RESULTS

Figure 1. Incidence evolution of notified new hepatitis C cases per 100,000 inhabitants according to sex. Barcelona, 2007 to 2013.



- 68,8% had been infected a maximum of 5 years with HIV when they got infected with HCV
- 14 blood samples → 2 clusters: genotypes 1a and 4d

CONCLUSIONS

- Great difference among sexes in the HCV evolution
- Increase of HCV cases in adult men whose only risk exposure was having sexual intercourse with other men
- ↑ HIV-HCV co-infection. HIV was first, more than half of cases occurred with a lapse of time of less than 5 years
- Sexual risk practices are common
- Different genotypes, then different clusters
- Ongoing outbreak

Table 1. Epidemiologic features and types of risk exposure in HCV acute cases among men aged 18-59. Barcelona, periods 2007-2011 and 2012-2013

| | 2007-2011 | 2012-2013 | P value |
|--|-------------|------------|---------|
| Age (Mean[ED]) | 41,0 [12,0] | 40,3 [8,2] | 0,780 |
| Country of origin: Spain | 16 (55,2) | 17 (45,9) | 0,457 |
| Type of non sexual risk exposure | | | |
| Intravenous drug use | 4 (13,8) | 1 (2,6) | 0,91 |
| Surgery, invasive treatments, diagnostic tests | 12 (41,4) | 0 (0,0) | <0,01 |
| Other: tattoo, piercing, acupuncture ... | 6 (20,7) | 1 (2,6) | 0,051 |
| Sexual risk exposure (MSM) * | NA* | 34 (87,2) | NA |
| Total | 29 | 39 | |

- 14 (37,8%) had had anonymous sex
- 19 (51,4%) had had unprotected sex at least once
- 8 (21,6%) had practiced "fisting"
- 9 (24,3%) had observed blood during intercourse