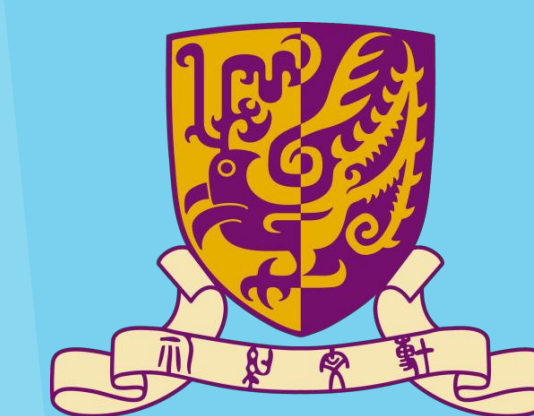


Concurrent transmission of HCV and bacterial STI in HIV-infected MSM



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Background

Sexual transmission of hepatitis C virus (HCV) has often been considered to be less efficient than that of other bacterial STI. However, epidemics of sexually acquired HCV infection have been reported internationally in the recent years among HIV positive MSM. In this connection the epidemiologic associations of concurrent transmission of HCV and other bacterial STI have yet to be determined.

Materials and Methods

Data: clinical data and blood samples of HIV positive patients diagnosed with acute HCV infection were collected from a major HIV specialist clinic (Integrated Treatment Centre) in Hong Kong.

Definitions:

Acute HCV infection: HCV antibody seroconversion, or interval ≤ 12 months between one's last HCV negative and first HCV positive test result.

Concurrent STI (outcome variable): the diagnosis of syphilis, gonorrhoea and/or chlamydia within 1 year of HCV diagnosis

Data analysis:

HCV genotyping (NS5B region) was performed on HCV RNA+ samples. HIV/HCV co-infected patients with and without concurrent STI were compared in logistic regression models and Mann-Whitney U

Conclusions

Chemfun were not uncommon among HIV+ MSM. The clustering of HCV genotype 3a reflected the networking of risk-taking MSM underlining concurrent transmission of HCV and syphilis.

Results

Between 2004 and 2017, a total of 79 HIV patients were diagnosed with sexually acquired acute HCV infection. All were male, 75 were Chinese, and 78 were MSM.

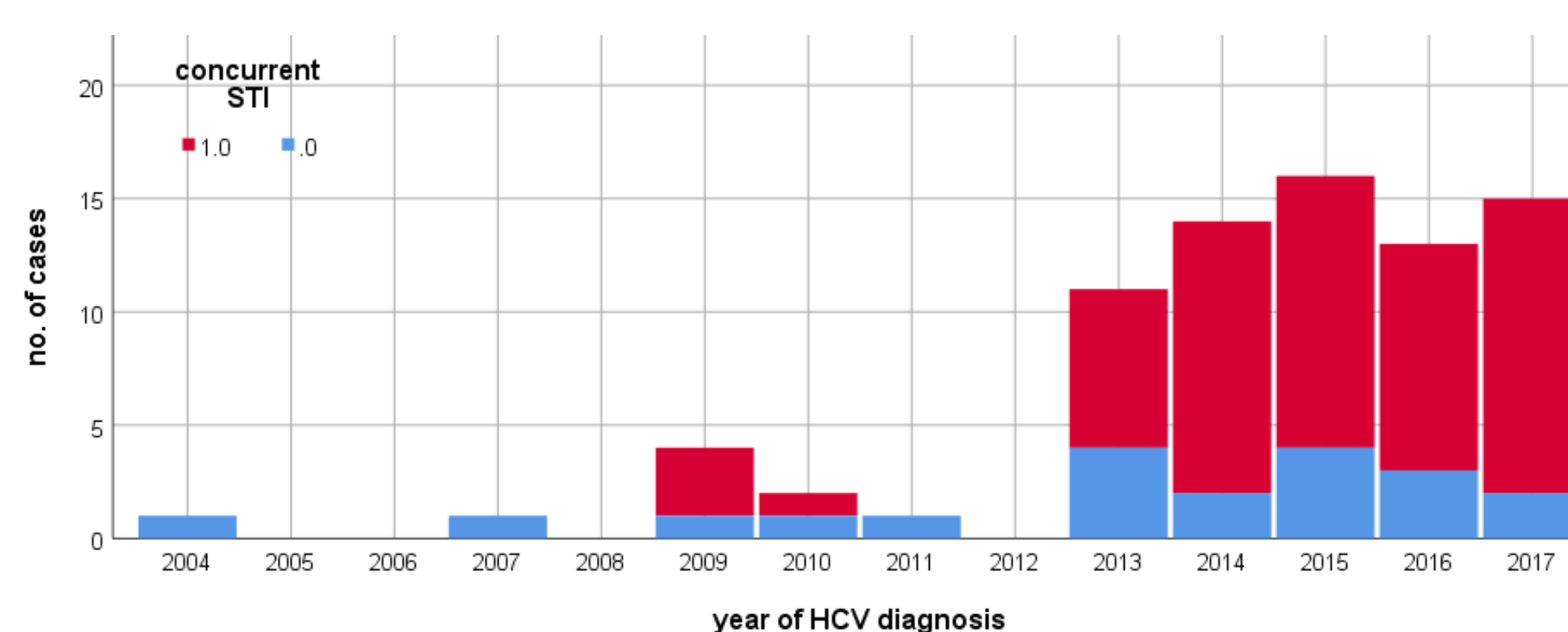


Fig. 1. Number of newly diagnosed acute HCV infection over time, stratified by concurrent STI

58 (74%) of patients had **concurrent STI**, of whom 30% had recreational drug use (chemfun) habit

- 53 (90%) with syphilis only,
- 1 (2%) with chlamydia only,
- 1 (1%) with chlamydia and gonorrhoea, 2 (3%) with chlamydia and syphilis, 2 (3%) with syphilis, gonorrhoea and chlamydia

Table 1 Comparison patients without (n=20) and with (n=58) concurrent STI

	no concurrent STI		concurrent STI		OR	95% C.I.
	n	%	n	%		
					U-test	p-value
Ethnicity						
non-Chinese	2	10%	2	3%	ref	
Chinese	18	90%	56	97%	3.17	0.42-24.12
HIV						
HIV subtype						
07_BC	1	8%	0	0%	/	
AE	3	23%	9	29%	1.23	0.27-5.61
B	9	69%	22	71%	ref	
Median HIV dx year, IQR	2009	2001-2012	2013	2007-2015	p=	0.02 *
Median HIV age, IQR	30	24-40	29	25-35	p=	0.92
on HAART	20	100%	56	95%		
Median HAART yr, IQR	2012	2002-2014	2013	2010-2015	p=	0.03 *
HCV						
HCV subtype						
non-3a	7	47%	9	20%	ref	
3a	8	53%	36	80%	3.50	1.003-12.22 *
Median HCV dx year, IQR	2014	2012-2016	2015	2014-2016	p=	0.05
Median HCV age, IQR	38	31-46	35	28-41	p=	0.18
Median years from HIV dx to HCV dx, IQR	3	1-13	1	1-7	p=	0.10
Median years from HAART to HCV dx, IQR	1	1-9	1	0-3	p=	0.23
HCV cluster						
1a	1	5%	4	7%	2.00	0.20-20.10
3a	8	40%	33	56%	2.06	0.72-5.94
NA	11	55%	22	37%	ref	
History of recreational drug use						
No	13	76%	37	69%	ref	
Yes	4	24%	17	31%	1.49	0.42-5.26

*p<0.05



Presented at HIV Glasgow 2018
28 – 31 October 2018, Glasgow