

Do transgender women living with HIV experience different HIV outcomes?

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BREACH

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Clinical Science

Introduction

In Belgium, 19,177 persons are living with HIV (Sciensano, December 2021), among which:



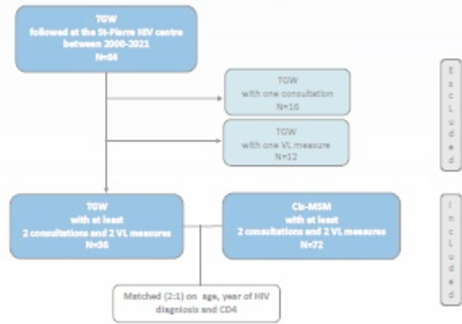
In many publications, transgender women (TGW) have a high prevalence of HIV (14%-22%) and lower access and retention in care; however, literature regarding HIV outcomes in TGW is scarce. This retrospective monocentric study analyzes whether TGW have different HIV outcomes compared to cis-MSM with HIV.

Material and methods

The Saint-Pierre HIV reference center currently follows 3 500 persons living with HIV. Data of demographic, clinical, and treatment against HIV and comorbidities are prospectively collected at each outpatient consultation in the Saint-Pierre HIV Cohort database. All patients have signed an informed consent allowing access to these data.

After obtaining the ethical committee agreement (CE/22-10-08), we collected demographic, psychological, sociological and clinical data from 64 TGW (defined as having 46XY and identifying themselves as female for at least 1 year) followed between 2000 and 2021 in our center. Baseline (B1) was defined as the first consultation.

We then matched 1 TGW to 2 cis-MSM on age, year of HIV diagnosis and CD4 cell count to compare follow up (FU) and outcomes. For this comparison, patients had to have at least 2 consultations (with at least one between 2000 and 2021) and 2 measures of VL.



Results

The cohort (n=64) at baseline (B1) had the following characteristics:

- Origin: Latin America=80%, Western Europe=20%
- Median age: 32,4 years old
- 82,5% without legal status
- 85,7% without health care insurance
- 64,6% are or were sex workers
- 6,3% have been incarcerated

HIV situation at baseline:

- Median time since HIV diagnosis: 8,1 months
- Median CD4 count = 508 cells/μL; 26,3% had <350 CD4 cells/μL
- Previous AIDS stage: 7,8%
- 54,7% are already under cART
- VL <50 cp/ml: 40%

Transition:

From baseline to follow-up, 18 patients (28%) had a change in their legal status, 15 (23%) had a change in their health insurance, and 10 (16%) had a change in their personal address.

Comparison between TGW (n=36) and cis-MSM (n=72) at baseline

Demography & sociology:

Most TGW are originating from South America (88,9%), don't have a legal status in Belgium (83,7%)*, nor an health care insurance (83%)* nor a personal address (58,3%)*. One third of them smoke, 25% drinks alcohol daily, and 36% takes drugs, mainly cannabis and cocaine; 75% had to practice sex work*; 27,8% were victim of physical abuse* and 11,2% of sexual abuse (*p<0,05).

The cis-MSM are from Western Europe (62,5%), live in Belgium legally (79%) with a health care insurance (69%) and a personal address (81%). Approximately one third of them went to university, smokes (32%) and 24% drink daily; 43,1% of them use drugs, including mostly Chemsex, cannabis, amphetamines and cocaine; 9,7% of them were physically and 2,8% sexually abused.

=> TGW were significantly more at risk to have illegal status, lack of health insurance or lack of personal address, to be sex worker or to have experienced physical abuse.

The median age at HIV diagnosis is 30,4 years-old compared to 34,8 years-old in cis-MSM and median duration of known infection is 8,4 months (interquartile range (IQR) of 60 months) for TGW group, in comparison with 11,2 months for cis-MSM. So duration of known infection at first consultation was longer in TGW than for cis-MSM, although not significant (p=ns). Accordingly, 50% of the TGW were already under cART against 33% for cis-MSM.

Comparison between TGW (n=36) and cis-MSM (n=72)

In the table below, we compared the FU (58,4 months for TGW vs 55,4 months for cis-MSM). More TGW presented a AIDS stage (11,1% vs 5,5% (ns)) and proportion of VL <50 cp/ml was higher for TGW (84% vs. 88,6% (ns)). Although > 95% of TGW and cis-MSM were under cART, the TGW were under either ritonavir, cobicistat, nevirapine or efavirenz that could have drug-drug interaction with feminizing hormonal treatment. Cis-MSM show a trend for higher rate of new infection with hepatitis C, syphilis and chlamydia and more cardiovascular comorbidities.

	TGW n=36	Cis-MSM n=72	P value
Time spent with an undetectable VL (months)	87,4 / IQR 110,5 (159,5-49)		0,6123
Average number of consultations during care	12,5	19,5	0,3419
VL < 50 cp/ml at the end of the FU	91,4% (32)	88,6% (62)	0,6709
Total time spent with an undetectable VL	47,5 / IQR 112 (130-18)	73,1 / IQR 72 (103-31)	0,5383
Median CD4TL count /μL	715,8 / IQR 358 (912-554)	716,2 / IQR 364 (918-554)	0,4094
Max CD4TL count /μL	902,5 / IQR 378 (1063-689)	1009 / IQR 407,5 (1222-814,5)	0,7286
Nadir CD4TL count /μL	421,4 / IQR 401 (628-227)	381 / IQR 326,5 (574-247,5)	0,5567
CDC stage at the end of FU/end of 2021			0,0288
- A	72,2% (26)	81,9% (59)	
- B	2,8% (1)	12,5% (9)	
- C + AIDS	25% (9)	5,5% (4)	
Patient who presented AIDS stage events	5,6% (2)	1,4% (1)	0,2577
Tuberculosis	2,8% (1)	0% (0)	
- Kaposi sarcoma	0% (0)	1,4% (1)	0,9946
- Pneumocystis jirovecii Pneumonia	0% (0)	0% (0)	
- Cryptococcosis	0% (0)	0% (0)	
- CMV	2,8% (1)	0% (0)	0,6342
Acquired co-infections compared to BSL			
- Hepatitis B	0% (0)	0% (0)	
- Hepatitis C	0% (0)	5,6% (4)	0,6084
No lab value available:	8,3% (3)	6,9% (5)	
- Gonorrhea	2,8% (1)	16,7% (12)	0,1663
Negative FU PCR	2,8% (1)	2,8% (2)	
No FU PCR available:	47,2% (17)	22,2% (16)	
- Chlamydia	8,3% (3)	11,1% (8)	0,7516
Negative FU PCR	2,8% (1)	5,6% (4)	
No FU PCR available:	50% (18)	54,2% (39)	
- Syphilis			0,2845
New episode:			
- No:	16,7% (6)	20,8% (15)	
- Yes	8,3% (3)	51,4% (37)	
Comorbidities			
- Diabetes	0	9 (12,5%)	ns
- Cardiovascular diseases	0	2 (2,8%)	

Discussion

In our cohort, TGW originate mainly from South America, and have significantly more illegal status in Belgium, lack of healthcare insurance and lack of personal address. They are more at risk to be sex workers and to be victim of physical and sexual abuse.

After the first consultation, half of the TGW were lost to FU and later, overall FU was shorter in TGW, probably due to cumulating social problems. Because most of TGW in our cohort speak only Spanish, medical and psychological cares might not be optimal. Frequent migrations for work or because of illegal status could also account for unstable lifestyle. As a consequence, we found shorter time with an undetectable VL in TGW and higher rate of AIDS stage.

However, infection by hepatitis C, syphilis, HIV, and Kaposi sarcoma are less prevalent in TGW than in cis-MSM, probably by sexual relations with heterosexual partners (in which these infections are less prevalent than in cis-MSM) and a lower use of ChemSex.

In this study, there was a trend for less cardiovascular diseases in TGW; this should be explored in future studies, looking for possible explanations such as differences in ethnicity, diet, BMI, or protection by feminization hormones.

The TGW hormonal treatment, mainly bought by internet and not under medical supervision; 25% of TGW were under ART containing ritonavir, cobicistat or first generation NNRTIs may induce drug-drug interactions with this feminization hormonal treatment.

The limitations of this study are mainly its retrospective and monocentric design and a small sample size due to high lost of FU. This sample size could account for statistically non significance.

Conclusion

The TGW in our cohort experience a different HIV outcome, with high rate of lost to FU, more AIDS stage and a shorter time with undetectable VL possibly due to combined social and psychological vulnerabilities.

There was a trend for lower rates of sexually transmitted infections and cardiovascular comorbidities in TGW compared to cis-MSM.

Clinicians should be aware of the potential interactions between cART and the hormonal treatment taken by TGW.

11th BREACH SYMPOSIUM
November 30th, 2023, Dolce