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Brief Original Article

High-risk sexual behavior and HIV/STDs cascade of care in migrants: results from an Italian dedicated outpatient clinic

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Abstract

Introduction: Ethnical segregation and migration influence sexual health. Differences in sexual networks and the risk of sexually transmitted diseases (STDs) between racial/ethnic minorities and the native population have been described in the literature.
Methodology: We collected data on sexual behavior and physical examination. Basing on CDC 2015 guidelines on STDs, anamnesis, and clinical features, screening for HIV/STDs was proposed.
Results: We enrolled 209 migrants, the median age was 32.5 (26-40) years, and 146 (69.9%) were male. The most represented nationalities were Nigerian, Senegalese, and Somali, with 85 (40.7%), 68 (32.5%), and 16 (7.7%) people, respectively. Twenty-two (10.5%) patients referred perianal/genital lesions, 6 (2.9%) abdominal/pelvic discomfort, and 183 (87.6%) were asymptomatic. Almost all symptomatic patients accepted the tests. 52/183 (28.4%) asymptomatic subjects accepted the tests, and only 24/52(46.2%) performed them. Among symptomatic patients were 6 (24%) HBsAg positivities and one (4%) HCV infection. Four (16%) people had latent syphilis; in 12 (48%) people, HPV-related genital warts were present, 7 (28%) people had Molluscum contagiosum, and 6 (24%) women had pelvic inflammatory diseases. Among patients referring no symptoms, there were 10 (41.7%) HBsAg positivities, one (4.2%) HIV infection, four (16.7%) latent syphilis, one (4.2%) HPV-related genital infection, and one (4.2%) PID. Being Nigerian and having symptoms were associated with a more high acceptance of the STDs test. Having a high-risk behavior was significantly associated with the development of at least one STD.
Conclusions: migrants have high-risk sexual behavior. Despite this, they have a low perception of HIV/STDs risk and healthcare needs. Particular attention should be given to improve access to HIV/STDs services that provide screening and treatment and increase the perception of healthcare needs.

Key words: Migrants; STDs; sexual behavior.

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Introduction

Sexually transmitted diseases (STDs) are defined as local or systemic infections, acquired through sexual contacts or objects used in such occasions. In the 21st century, there is still an unacceptably high global incidence of STDs. Around the world, more than one million STDs are acquired every day. The burden of morbidity and mortality worldwide, resulting from sexually, genitally, and extra-genitally transmitted pathogens, compromises the quality of life and sexual and reproductive health, newborn, and child health [1]. Moreover, it is widely recognized that STDs facilitate the sexual transmission of HIV. For example, syphilis increases HIV infection risk by three-fold or more. However, there has been no reduction of new HIV infections rates among young people and adults between 2010 and 2015, threatening future progress towards the goal of ending the AIDS epidemic by 2030 [2]. The prevalence and incidence of STDs significantly change regarding underserved populations. Among these, social determinants such as segregation, migration, and healthcare provision and use can influence STDs spread. As a consequence, epidemiological differences between population subgroups can be highlighted, due to healthcare disparities, with a possible impact on other communities. Furthermore, race and ethnicity seem to represent a substantial element for higher STDs rates than the rest of the population [3]. Published studies showed how HIV/STDs prevalence among racial and ethnic minorities are from 5.4 to 17.8 times higher in respect of Caucasian. Furthermore, young black men

and women seem to be at risk regardless of their behavior [4,5]. The CDC surveillance also highlighted the significant difference inherent in ethnicity regarding STDs [6]. The high migratory flows, mostly from Africa to Italy in the last years, increasingly require more attention from healthcare providers to underserved populations such as migrants.

We report our experience and the cascade of care of STDs among migrants referring to our dedicated outpatient clinic in Sassari, Italy.

Table 1. Demographic and clinical features of 209 patients enrolled in the outpatient clinic for migrants.

Variable	
Age (years), median (IQR)	32.5 (26-40)
Gender	
Male	146 (69.9%)
Female	63 (30.1%)
Sexual behavior	
Heterosexual	170 (81.3%)
MSM	17 (8.1%)
Sex workers	22 (10.6%)
Nationality	
Bangladesh	12 (5.7%)
Federal Republic of Nigeria	85 (40.7%)
Federal Republic of Somalia	16 (7.7%)
Ivory Coast	13 (6.2%)
Republic of Ghana	1 (0.5%)
Republic of Guinea	12 (5.7%)
Republic of Senegal	68 (32.5%)
Republic of Sierra Leone	2 (1%)
Anamnesis	
Abdominal pain alone	3 (1.4%)
Genital lesions	20 (9.6%)
Abdominal pain + genital lesions	3 (1.4%)
Performed STDs screening tests	49 (23.4%)
Results among people who accepted tests	
HBsAg positive	6 (12.2%)
OBI	4 (8.1%)
Syphilis	2 (4.1%)
Genital warts	5 (10.2%)
Molluscum contagiosum	5 (10.2%)
PID	1 (2%)
HBsAg + Molluscum contagiosum	1 (2%)
HBsAg + genital warts	3 (6.1%)
OBI+ HIV	1 (2%)
OBI + syphilis	4 (8.1%)
OBI + genital warts	1 (2%)
OBI + Molluscum contagiosum	1 (2%)
OBI + PID	1 (2%)
HBsAg + genital warts + HCV	1 (2%)
HBsAg + syphilis + PID	1 (2%)
OBI + syphilis + PID	1 (2%)
OBI + genital warts + PID	3 (6.1%)

IQR: interquartile range; MSM man who has sex with men; OBI: occult hepatitis B infection; PID: pelvic inflammatory disease.

Methodology

Study conduction

We conducted a survey among illegal migrants admitted to our dedicated outpatient clinic from July to September 2019.

The anamnesis on sexual behavior, and the data on clinical examination were collected to identify the prevalence of individuals with high-risk sexual patterns or STDs suspicion. The screening for HIV/STDs was purposed based on both the 2015 CDC guidelines on STDs [7]. Screening purpose was also based on the anamnesis regarding sexual behavior, and physical examination. High-risk sexual behavior was defined as having multiple partners, chosen or not, without the use of condoms.

Statistical analysis

Data distribution was evaluated with the Kolmogorov-Smirnov test. Data were elaborated as numbers on total (percentages), and median (IQR) when appropriate.

Categorical variables were evaluated with the Pearson Chi-square test. Univariate analysis was conducted to evaluate factors associated with the acceptance of STDs screening and with the presence of STDs. Independent variables resulting in a p-value < 0.2 at univariate analysis were included in the model. The significance level was defined as a p-value < 0.05.

Ethical issues

This research was conducted according to the Helsinki Declaration. Data were collected anonymously, and all patients signed informed consent.

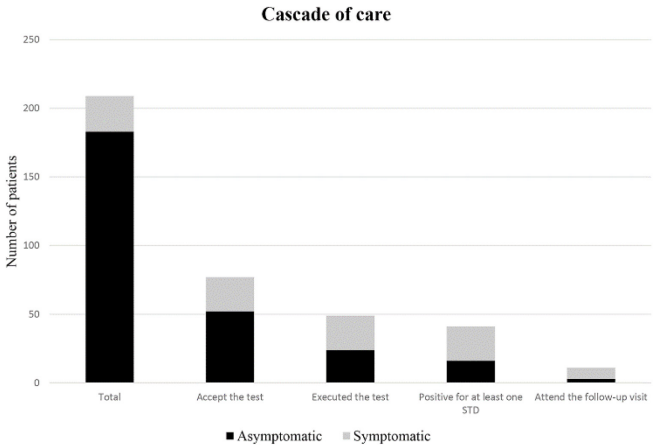
Results

Overall, 209 patients were evaluated, with a median age of 32 (26-40). Of them, 146 (69.9%) were male. No one had ever performed a screening for HIV/STDs before. Men who have sex with men (MSM), sex workers and heterosexuals, were 17 (8.1%), 22 (10.6%), and 170 (81.3%), respectively. Overall, 20 (9.6%) reported anal or genital lesions, three (1.4%%) pelvic discomfort, three both pelvic discomfort and anal or genital lesions (1.4%%), and 183 (87.6%) were asymptomatic. The patients' demographic characteristics, clinical features, and diagnoses have been summarized in Table 1. After the first evaluation, further investigation with blood tests for HBV, HCV, HIV, syphilis both for the symptomatic and the asymptomatic patients was proposed. People with anal or genital lesions were proposed for dermatovenerologist consultation, in order to

investigate the presence of HPV-related genital warts, or Molluscum contagiosum infection. The gynecologic examination was proposed to women with pelvic discomfort or STD positivity. STDs tests were accepted by almost all symptomatic patients. One refuse occurred. Regarding the asymptomatic testing, it was accepted by only 52/183 (28.4%) subjects, and performed by 24/52 (46.2%) of them. All the twenty-five symptomatic patients were positive for at least one STD. In particular, 6 (24%) had a HBsAg positivity, 1 (4%) had a HCV infection, 4 (16%) had latent syphilis, 12 (48%) had HPV-related genital warts, 7 (28%) had Molluscum contagiosum infection, and 6 (24%) a pelvic inflammatory disease (PID). Overall, 6 (24%) patients had multiple infections. About the 24 asymptomatic patients, 16 (66.6%) had at least one STD positivity. Ten patients had a HBsAg positivity (41.7%), 1 (4.2%) had a diagnosis of HIV infection, 4 (16.7%) had latent syphilis, one (4.2%) patient had HPV-related genital warts, and one woman (4.2%) had a PID. Four (16.7%) were cases of multiple infections. The cascade of care among patients enrolled has been reported in Figure 1. Overall, only 11 patients attended the follow-up visit for the treatment. Of them, 8/25 (32%) and 3/24 (12.5%) among symptomatic and asymptomatic patients, respectively. At the chi-square test, being Nigerian does not result in a higher STDs screening acceptance (*p-value* = 0.19). For this reason, it was included in the multivariate analysis.

When performing logistic regression (Table 2), being Nigerian and having symptoms were significantly associated with the level of STDs test acceptance. Instead, only having a high-risk behavior was significantly associated with the development of at least one STD (Table 3).

Figure 1. Cascade of care 209 patients enrolled in the outpatient clinic for migrants.



Discussion

Migrants represent a fragile population, widely studied in literature for a broad spectrum of heathcare needs [8,9]. STDs are among the most crucial world health problems, and their disparities in underserved populations, such as migrants, have been widely discussed in the literature [10]. In any population, the spread of infectious diseases depends on the possibility of contact between susceptible and infected people, and migration could concur with this mechanism. Migrants who attend to healthcare services in our area have a high-risk sexual behavior. Despite this, they seem to have a low perception of HIV/STDs risk and healthcare needs. Migration may represent a central condition that could concur with STDs diffusion. Multiple factors, such as ethnic segregation, lower economic status, education level, and differences in sexual patterns, have been reported in migrants compared to non-migrants, turning the former into a higher risk [11]. It is also described that mixing different subpopulations may

Table 2. Factors associated with the acceptance of STDs screening at logistic regression analysis.

Variable	p-value	Odds ratio	95% CI
Nigerian nationality	0.001	4.787	1.878-12.206
Male gender	0.089	0.462	0.19-1.126
High risk behavior	0.358	0.566	0.169-1.902
Age between 18-26 years	0.675	0.816	0.319-2.095
Presence of symptoms	< 0.001	36.338	9.896-133.436

Table 3. Factors associated with the presence of STDs at logistic regression analysis.

Variable	p-value	Odds ratio	95% CI
Nigerian nationality	0.282	1.524	0.702-3.286
Male gender	0.593	0.8	0.353-1.813
High risk behavior	< 0.001	5.398	2.355-12.376
Age between 18-26 years	0.538	0.765	0.327-1.793

represent a risk factor in the transmission of STDs from a community member to a member of another, who could, in turn, involve all his community in STDs spread [12]. This is why the assessment of high-risk sexual behavior among migrants could represent the first step for creating a successful approach in prevention measures. Furthermore, particular attention should be given to improve knowledge and access to HIV and STDs prevention, screening, and treatment. A right counseling approach is required among this particular population, given the necessity to increase the perception of healthcare needs. In fact, in our cohort, a low rate of patients accepted HIV/STDs screening, including people with symptomatic genital/perianal lesions, who sometimes did not come back to start the treatment. Some limitations should be addressed regarding our study. Particularly, only a limited time has been analyzed. Furthermore, asylum seekers were not included in our cohort. This means that no migrants admitted to the facilities ware part of the study population, and these results could be indicative only for a specific subgroup of migrants. In conclusion, our study highlights the need to improve information among migrants on sexual health and to reduce the barriers encountered by the clinicians in healthcare provision in such challenging settings.

References

1. Sexually transmitted infections: implementing the Global STI Strategy. WHO. Available: https://www.who.int/reproductivehealth/publications/rtis/implementing-stis-strategy/en/2. Accessed 6 June 2020
2. Political Declaration on HIV and AIDS: On the Fast Track to Accelerating the Fight against HIV and to Ending the AIDS Epidemic by 2030 | UNAIDS. Available:https://www.unaids.org/en/resources/documents/2016/2016-political-declaration-HIV-AIDS. Accessed: 12 April 2020.
3. V. Fiore, G. Latte, G. Madeddu, G. Galleri, G. Rocchitta, S. Nuvoli, D. Calvisi, P. Bagella, R. Manetti, P.A. Serra, A. Spanu, S. Babudieri (2017) Underserved populations and bacterial and protozoal sexually transmitted infections. Eur Rev Med Pharmacol Sci 21: 3935–3943.
4. Hallfors DD, Iritani BJ, Miller WC, Bauer DJ (2007) Sexual and drug behavior patterns and HIV and STD racial disparities: The need for new directions. Am J Public Health 97: 125–132.
5. Newman LM, Berman SM (2008) Epidemiology of STD disparities in African American communities. Sex Transm Dis 35.
6. Sexually Transmitted Disease Surveillance 2018 | CDC. Available: https://www.cdc.gov/std/stats18/STDSurveillance2018-full-report.pdf. Accessed 6 June 6 2020
7. Frieden TR, Harold Jaffe DW, Rasmussen SA, Leahy MA, Martinroe JC, Spriggs SR, Doan QM, King Terraye M Starr PH, Roper WL, Hill C, Matthew Boulton CL, Arbor A, Virginia Caine MA, Jonathan Fielding IE, Remington PL, William Schaffner W (2015) Sexually Transmitted Diseases Treatment Guidelines, 2015. Morb Mortal Wkly Rep 64:1–140.
8. Ceccarelli M, Chiappini E, Arancio R, Zaffaroni M, La Placa S, D'Andrea M, de Waure C, Da Riol RM, Valentini P; on the behalf of National Working Group for the Migrant Children of the Italian Society of Pediatrics (NWGMC-ISP) (2020) Vitamin D deficiency in a population of migrant children: an Italian retrospective cross-sectional multicentric study. Eur J Public Health 30: 551-556.
9. Salerno G, Ceccarelli M, de Waure C, D'Andrea M, Buonsenso D, Faccia V, Pata D, Valentini P (2018) Epidemiology and risk factors of hypovitaminosis D in a cohort of internationally adopted children: a retrospective study. It J Pediatr 44:86
10. Aral SO, O'Leary A, Baker C (2006) Sexually Transmitted Infections and HIV in the Southern United States: An Overview. Sex Transm Dis 33: S1–S5 .
11. Wang W, Wei C, Buchholz ME, Martin MC, Smith BD, Huang ZJ, Wong FY (2010) Prevalence and risks for sexually transmitted infections among a national sample of migrants versus non-migrants in China. Int J STD AIDS 21:410–415 .
12. Wolfe WA (2003) Overlooked role of African-American males' hypermasculinity in the epidemic of unintended pregnancies and HIV/AIDS cases with young African-American women. J Natl Med Assoc 95: 846–852

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