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Research Article

HIV-Positive and HIV-Negative Females with Opioid Dependence: Clinical and Psychosocial Characteristics

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Abstract

Objective: The objective of the study was to explore clinical, psychological and social characteristics of female injectable opioid users (FIOUs) with different HIV status.

Materials and Methods: A total of 217 FIOUs were examined (104 HIV-positive and 113 HIV-negative patients. To assess patient social functioning, quality of life, and craving for narcotic substances the Scale of social functioning, SF-36 and Scale of drugs craving were used.

Results: The majority of patients had frequent change of employment place and reported absence from work (25.9% in HIV-positive group and 26.5% in HIV-negative group; $P > 0.05$). HIV-positive patients reported low professional qualification and education level significantly more often than HIV-negative patients (20.1% vs 13.2%, $p < 0.05$ and 43.3% vs. 36.2%, $p < 0.05$, respectively). They also characterized family climate as "hostile" more often (80.7% vs. 61.0%, $p < 0.05$). Both groups reported high rates of parental alcohol abuse (17.3% in HIV-positive and 14.1% in HIV-negative individuals, $p > 0.05$) and of parental divorces (23.1% and 28.3%, $p > 0.05$, respectively).

Conclusion: Female injectable opioid users have marked social disfunction involving social and professional domains. Specific needs of this group of mental healthcare users need to be addressed.

Keywords: *Gender; Quality of Life; Social Functioning; Opioid; HIV*

Background

Females represent one third of injectable drug users (IDU) population worldwide, and nearly 0.11% of female population inject psychotropic substances [1].

Women consume opioids more often than men [2]. It is also known that women are more likely to misuse the prescribed psychotropic drugs [3,4].

Risk factors for drug abuse among women are sexual abuse in childhood and domestic violence. Nearly 20% of women who previously have experienced violence develop a mental disorder, most often depression and post-traumatic stress disorder [5]. Despite the fact that

women start using narcotic drugs later than men, consumption of cannabis, opioids and cocaine is growing faster in this population than in men, before developing disorders on the basis of receiving surfactant, compared with men, women who use heroin, at least use it with the help of injections in smaller doses and for a short time, are younger and are often influenced by drug-using sexual partners, who often do the first injection of drugs to a woman [5].

The transition to IPRs among women may be due to personal characteristics or external circumstances. This may be a consequence of problems in personal life, affective and anxiety disorders, desire to lose weight, struggle with exhaustion, anesthesia, self-treatment of mental disorders, physical or sexual violence experienced in childhood, involvement in the sex industry and communication with injecting drug users (IDUs) [5].

Many more often than not, women who practice pit report using needles in combination, explain that they are not aware of the risks involved, are unable to buy syringes/needles from pharmacies, or fear of over-policing, using shared needles as a sign of love or trust in a partner. "Dirty" injections can cause damage to the veins and cause serious complications. FIOU are experiencing problems such as fatigue, loss of weight, withdrawal symptoms of pain, depression and a suicide attempt, many of them suffer from sexually transmitted diseases, viral hepatitis. For these women, access to health care is mainly hampered by the fact that society condemns women who inject drugs more than men [5].

Women heroin users, younger age compared with men who rarely consume it by injection in smaller doses and for a shorter time, often under the influence of sexual partners, using drugs that often make the woman the first injection of drugs. Often the transition to injecting drug use (IDU) among women is due to personal characteristics of women or external circumstances due to problems in their personal lives, affective or anxiety disorders, desire to lose weight, fight against exhaustion, anesthesia, self-treatment of mental disorders, physical and sexual violence experienced in childhood, involvement in the sex industry or communication with IDUs [2].

Many women who practice drug injections report sharing needles, either because they are not aware of the risks, or because they are unable to buy needles from pharmacies, or because they fear the police, or because they share needles as a sign of love or trust in their partner. Lack of IDU experience can lead to vein damage and cause serious complications. FIOU often experience fatigue, weight loss, pains, depression, suicide attempt, many of them suffer from sexually transmitted diseases, hepatitis. Access to health care for them is difficult because of the public condemnation [2].

For the period between 1999 and 2010, mortality among FIOU, in particular the use of opioid analgesics prescription in the USA increased five-fold among men by 3.6 times. More than 15,000 women died from a drug overdose in the United States in 2012. From 2007 to 2008 in England and Northern Ireland, overdose mortality among women increased by 17%, among men by 8% [4,6-10].

Purpose of the Study

The purpose of this study is to study the medical and social characteristics of HIV-positive (HPW) and HIV-negative (HNW) women who inject drugs (opioid group) (FIOU).

Materials and Methods

This study was conducted on the basis of Grodno State Medical University according to the research program "To develop the criteria for clinical and social functioning assessment, to assess the quality of life and maladaptation of injecting drug users (IDUs) on different stages of HIV infection" (No State Registration 201501548), with the scientific and methodological support of the National Research Center for Addiction Problems - a branch of the National Medical Research Center of Psychiatry and Narcology named after V. P. Serbsky" Ministry of Health of Russia.

The study design had combined elements of both cross-sectional and longitudinal analyses. A6-foldassessmentof the monitored parameters was performed before and after treatment, after 1, 3, 6 and 12 months from the beginning of follow-up.

The clinical study was performed in accordance with GCP rules, according to the Protocol using an individual registration data card. The study was developed by conducting an individual registration form that includes the questions that health and social aspects of FIOU. 217 female psychiatric inpatients with opioid dependence living in the Republic of Belarus were examined. The examined patients were randomized into 2 groups: group 1 - 104 HPW with the average age of 30.8 (SD = 4.86) and group 2 - 113 HNW with the average age of 29.9 (SD = 6.67). The average age of HIV infection in the HPW group was within Me 24.0 (21.0 - 27.0).

Results and Discussion

Professional cohort	HPW		HNW		Statistical significance
	(n = 104) abs.	%	(n = 113) abs.	%	
Without a profession	43	41,3%	39	34,5%	p = 0,011 (χ^2 = 9,064, df = 2)
Workers	55	55,28%	52	46,0%	
employees	6	5,7%	22	19,5%	

Table 1: *Professional status.*

The majority of FIOU such as the lack of a stable employment. At present, 17.3% of HPV and 20/17. 6% of HPV patients had temporary or seasonal work; frequent changes of places of work, interruptions were observed in 27/25.9% of HPW and 30/26.5% HNW; not working, not studying, avoid employment 63/60.5% HPW and 53/46.9% HNW; were employed in low-skilled jobs 24/23.1% of HPW and 19/16.8% of HNW. Systematic violations of labor discipline in 16/15.3% HPW and 9/7.9% HNW were shown in the form of frequent layoffs; in 15/14.4% HPW and 9/7.9% HNW - administrative penalties; in 19/18.2% HPW and 16/14.1% HNW - conflict relations/negative attitude to work. Disability had 3/2.88% of HPW and 1/0.88% of HNW.

Educational level	HPW		HNW		Statistical significance
	(n = 104) abs.	%	(n = 113) abs.	%	
Incomplete secondary education	21	20.2%	15	13,3%	p = 0,077 (χ^2 = 6,862, df = 3)
Secondary education	43	41,3%	41	36,3%	
Secondary special education	36	34,6%	43	38,1%	
Higher education	4	3,8%	14	12,4%	

Table 2: *Educational level.*

Their own families had 49/47.1% of HPW and 48/42.4% of HNW. Were in primary marriage 31/29.8% HPW and 37/32.7% HNW, repeated - 13/12.5% HPW and 14/12/ 3% HNW, civil - 18/17.3% HPW and 19/16.8% HNW. Divorced were 20/19.2% HPW and 24/21.2% HNW. Had children 72/69.2% HPW and 73/64.6% HNW. Lived with own family 31/29.8% HPW and 37/32.7% HNW. Most of the time was spent among unfamiliar people, came home only for the night 21/20.1% of HPW and 9/7.6% of HNW ($p < 0.05$).

The situation in the family was characterized by often conflicts in 84/80.7% of HPW and 69/61.0% of HNW, alcohol abuse of parent(s)-18/17.3% of HPV and 16/14.1% of HNV, lack of sufficient financial resources, low family income- 57/54.8% of HPW and 45/39.8%;of HNW($p < 0.05$), divorce of parents - 24/23.1% of HPW and 32/28.3% of HNW.

Age of the first drug trial was 18.1 (SD = 3.4) among HPV and 20.4 (SD = 4.8) among HNV. Opiates were used in 77/74.0% of HPW and 93/82.3% of HNW. Cannabinoids were used by 10/9.6% HPW and 8/7.0% HNW, psychostimulants - 7/6.7% HPW and 9/7.9% HNW, tranquilizers - 16/15.3% HPW and 1/0.8% HNW ($p < 0.001$), barbiturates - 4/3.8% VPN and 2/1.7% VNN($p < 0.05$).Non-disposable syringes/needles were used by 46/44.2% of HPW and 11/9.7% of HNW ($p < 0.001$), ignoring the sterility of the drug or the container in which it was 68/65.3% of HPW and 53/46.9% of HNW ($p < 0.05$).

The leading motive of drug abuse in 21/20.1% of HPW and 31/27.4% of HNW was the search for new pleasant sensations and curiosity. The desire to facilitate contact with people, to satisfy sexual needs were reported by 10/9.6% of HPW and 9/7.9% HNW, to show his independence - 22/21.1% HPW and 35/30.9% HNW, induce euphoria, a pleasant feeling of altered mood - 41/39.4% of HPW and 49/43.3% (HNW), the desire to neutralize the negative emotional experiences - 24/23.1% of HPW and 27/23.8% HNW, to r educe apathy, to improve working productiveness - 26/25.0% HPW and 33/29.2% HNW to mitigate the withdrawal state - 86/82.6% of HPW and 68/60.1% HNW ($p < 0.05$); to protest - 5/4.8% HPW and 5/4.4% HNW.

Use of the drug during loneliness reported 17/16. 3% HPW and 11/9.7% affluent ($P < 0.05$), in a criminalized company - 83/79.8% HPW and 89/78.7% territory. If it is impossible to get the "main" drug, used other psychoactive substances (PAS) 41/39.4% HPW and 41/36.2% HNW, in combination with alcohol or drugs used drugs 44/42.3% HPW and 39/34.5% HNW, a few PAS (surfactants) with the presence of the preferred drug - 3/2.8% HPW and 11/9.7% HNW ($p < 0.05$).

The duration of drug use without dependence lust for 1 month among 31/29.8% of HPW and 28/24.7% of HNW patients; for two months among 11/10.5% of HPW and 16/14.1% of HNW; for 3 months among 16/14.1% HNW and 1/0.9% of HPW and 5/4.4% HNW ($p < 0.05$); for 6 months among 41/39.4% of HPW and 40/35.3% HNW, for more than 6 months - 13/12.5% of HPW and 21/18.5% of HNW. The emergence of signs of a withdrawal state came from the beginning of the drug up to 1 month recorded at 35/33.6% of HPW and 25/22.1% HNW, up to 2-3 months - 17/16.3% of HPW and 22/19.4% HNW, up to 6 months - 41/39.4% of HPW and 40/35.3% HNW, more than 6 months - 16/15.3% of HPW and 24/21.2% HNW. Illegal drug use recorded in 62/59.6% of HPW and 34/30.0% HNW accounted for more than 10 years; 5 - 10 years - 30/28.8% of HPW and 38/33.6% HNW, less than 5 year - 7/6.7% of HPW and 22/19.4% of HNW ($p < 0.01$).

Features of Drug abuse	HPW		HNW		Statistical significance
	(n = 104) abs.	%	(n = 113) abs.	%	
Injections only	84	80,7%	103	91,1%	p = 0,017 (χ^2 = 8,171, df = 2)
Combination of different pathways of drug abuse	9	8,6%	1	0,8%	
Non-injectional methods of drug abuse	11	10,7%	9	8,1%	

Table 3: *Features of drug abuse.*

Attraction to drug use at 33/31.7% HPW and 60/53.1% HNW was situational, when released into the environment, 16/15.3% HPW - situational due to the "double stigma - HIV-infected female drug addicts", 42/40.3% of HPW and 55/48.6% HNW - obsessive, escalating of conflict, 68/65.3% HPW and 42/37.1% HNW ($p < 0.05$) - compulsive search of the drug or its substitutes, desire for contacts with the IDUs to obtain the illegal drug, 16/15.3% of HPW and 16/14.1% HNW - compulsive with a pronounced behavioral component with internal tension, excitability and increased irritability.

More than 10 cases of withdrawal states were observed in 37/35.5% of HPW and in 23/20.3% HNW; up to 10 of such cases were observed in 30/28.8% of HPW and in 34/30.0% of HNW; up to 5 cases-in 25/24.0% HPW and 33/29.2% HNW, once - in 8/7.6% HPW and 10/8.8% HNW. The duration of withdrawal status lust for more than 14 days among 5/4.8% HPW, lust less than 14 days among 15/14.4% HPW and 1/0.8% HNW ($p < 0.01$), lust for 10 days - 36/34.6% among HPW and 27/23.8% HNW ($p < 0.05$), lust for 7 days -40/38.4% among HPW and 62/54.8% HNW, lust for 3 - 5 days among 3/2.8% HPW and 6/5.3% HNW. The severity of withdrawal state was mild among 3/2.8% of HPW and 10/8.8% of HNW ($p < 0.05$); 79/75.9% of HPW and 77/68.1% of HNW - moderate and in 18/17.3% of HPW and 13/11.5% of HNW - severe. The most common manifestations of a withdrawal state were in 82/78.8% of HPW and 76/67.2% HNW were somatic and neuro-vegetative disorders, tremor, sweating, disorders of the cardiovascular system; in 7/6.7% of HPW and 22/19.4% HNW ($p < 0.05$) - psychopathological disorders (fear, anxiety, depression, agitation); in 22/21.1% of HPW and 29/25.6% HNW - pain, convulsive disorders, 22/21,1% of HPW and 17/15.0% HNW - asthenic syndrome (sleep disturbances, general weakness, malaise).

The predominant symptoms in post-abstinent state were asthenic with general weakness, malaise, nausea, dizziness, observed in 70/67.3% HPV and 78/69.0% HPV; in 28/26.9% HPV and 20/17.6% HPV, behavioral disorders prevailed; in 21/20. 1% HPV and 15/13.2% HPV aspontaneity was observed. Duration of post-abstinent state in 15/14. 4% HPW and 5/4.4% of the territory for more than 1 month; in 67/64. 4% HPW and 62/54. 8% wealthy-up to 1 month; in 17/16.3% HPW and 13/11.5% of the territory-14 days; in 4/3. 8% HPW and 20/17. 6% of the territory-3-7 days ($p < 0.01$).

The main type of intoxication experience in 65/62.5% of HPW and 61/53.9% of HNW was "pleasant relaxation", feelings of peace, deep self-contemplation; in 34/32.6% of HPW and 48/42.4% of HNW - desire for activity, feeling of fullness of life; in 50/48.0% of HPW and 54/47.7% of HNW - euphoria, emotional excitement, elation. However, modified forms of drug intoxication were also observed such as predominance of low mood, sadness at 18/17.3% of HPW; dysphoria and irritability - 4/3.8% of HPW; aggressiveness on the background of emotional arousal - in 5/4.8% HPW vs 1/0.8% HNW($p < 0.05$); demonstrative suicidality - in 2/1.9% of HPW; losing the sense of tact and shame, tearfulness- in 5/4.8% of HPW vs 1/0.8% of HNW ($p < 0.05$).

A complete abstinence from drug use was observed in 14/13.5% of HPW and 8/7.1% of HNW, partial - in 58/55.8% of HPW and 45/39.8% of HNW ($p < 0.05$), spontaneous - in 8/7.7% of HPW and 3/2.7% of HNW($p < 0.05$); therapeutic remission - in 20/19.2% of HPW vs 26/23.0% of HNW. Early relapse (within 1 month after treatment) was observed in 40/38.5% HPW and 35/31.0% HNW, up to 3 months - in 18/17.3% HPW vs 13/11.5% HNW; 6 months - 7/6.7% HPW vs 21/18.6% HNW ($p < 0.05$); up to 12 months-24/23.1% HPW vs 17/15.0% HNW; more than 12 months - 12/11.5% HPW vs 17/15.0% HNW.

The predominant symptoms in 70/67.3% of HPW and 78/69.0% of HNW in post-abstinent state were asthenic with general weakness, malaise, nausea, dizziness; in 28/26.9% of HPW and 20/17.6% of HNW were dominated by behavioral disorders; in 21/20.1% of HPW and 15/13.2% of HNW -lack of spontaneity. The duration of post-abstinent state was in 15/14.4% HPW and 5/4.4% HNW more than 1 month; in 67/64.4% HPW and 62/54.8% HNW - up to 1 month; in 17/16.3% HPW and 13/11.5% HNW - 14 days; in 4/3.8% HPW and 20/17.6% HNW – 3 - 7 days ($p < 0.01$).

Ability to critically assess the condition, partial criticism, preservation of drug addiction, emotional and volitional disorders, distortion of basic personal qualities were observed in 74/71.1% HPW and 84/74.3% HNW; formal criticism to drug intake, the desire to abandon anesthesia, the perseverance of critical prognostic abilities - 7/6.7% HPW and 22/19.4% HNW ($p < 0.01$); understanding of the consequences of intoxication, critical assessment of their condition with the desire to continue taking drugs giving "philosophical" justification - 8/7.6% HPW; the desire to take the drug with a full awareness of the disease, confidence in the ability to cope with the disease - 7/6.7% of HPW; did not hide the drug, was not treated, did not perform doctor's appointments 3/2.8% of HPW.

Motives for stopping drug abuse	HPW		HNW		Statistical significance
	(n = 104) abs.	%	(n = 113) abs.	%	
The desire to reduce the dose of the drug	32	30,7%	26	23,0%	p = 0,01969 (χ^2 = 1,167, df = 1)
The desire to stop the drug abuse	38	36,5%	57	50,4%	p = 0,0392 (χ^2 = 4,25, df = 1)
Financial problems	62	59,6%	61	53,9%	p = 0,4028 (χ^2 = 0,70, df = 1)
Problems with obtaining drugs permanently	49	47,1%	37	32,7%	p = 0,036 (χ^2 = 4,68df = 2)
Moral pressure from relatives	26	25,0%	40	35,3%	p = 0,0963 (χ^2 = 2,77, df = 1)

Table 4: *Motives for stopping drug abuse.*

Experience of rehabilitation programs	HPW		HNW		Statistical significance
	(n = 104) abs.	%	(n = 113) abs.	%	
Absence	82	78,8%	92	81,4%	p = 0,004 (χ^2 = 13,429, df = 3)
In the addictology stationary units of health institutions	4	3,8%	14	12,3%	
In the centers created by non-governmental organizations	8	7,6%	6	5,2%	
In the commercial organizations	10	9,6%	1	0,8%	

Table 5: *Experience of rehabilitation programs.*

Experience of rehabilitation programs in 82/78.8% of HPW and 90/79.6% of HNW was absent. In the addictology stationary units of health institutions rehabilitated 4/3.8% of HPW and 14/12.3% HNW; in the center created by non-governmental organizations - 4/3.8% of HPW and 1/0.8% of HNW ($p < 0.05$); in the center, created by the Christian missions - 4/3.8% of HPW and 5/4.4% HNW: commercial rehabilitation - 10/9.6% of HPW and 1/0.8% of HNW ($p < 0.01$).

Clinical manifestations of HIV infection were characterized in 57/54.8% of HPW during the month by a decrease in body weight for no apparent reason, in 37/35.6% of HPW - persistent causeless fever, in 15/14.4% - diarrhea, in 71/68.3% - an increase in lymph nodes, in 44/42.3% -unexplained constant night sweating, in 24/23.1% - rapid fatigue, leading patients to spend most of the time lying down. 61/58.7% of HPW were receiving antiretroviral therapy.

There was a diverse range pf comorbid conditions. Organic mental disorder was observed in 5/4.8% of HPW, affective disorders - in 34/32.7% of HPW, neuroses - in 21/20.2% of HPW. Diseases of the respiratory system were noted in40/38.5% HPW, cardiovascular

system disorders - for 19/18.3% of HPW; gastrointestinal pathology - for 28/26.9% of HPW; liver disorders- in 98/94.2% of HPW; renal pathology - for 9/8.7% of HPW; skin diseases - for 9/8.7% of HPW; malignant neoplasms - for 3/2.9% of HPW; central nervous system diseases - for 2/1.9% of HPW.

There were diverse changes of the way of life typical for HPW were, among which 34/32,7% of HPW indicated incomplete education, 41/39,4% - change in habitual lifestyle, social activity, 83/79,8% HPW- communication with persons with antisocial behavior, 59/56,7% HPW - limited freedom of choice, lifestyle change, societal status loss,44/42,3% HPW - forced social isolation, lack of the usual circle of communication and friendship, 56/53,8% HPW - problems in family relations, inability to create one's own family, to have children, 64/61,5% HPW - increased risk of job loss, unemployment, frequent change of employment place, 80/76,9% of HPW - housing and financial problems, debts, 26/25% of HPW - lack of housing or registration at the place of residence, semi - legal residence, 35/33,7% of HPW - poor hygiene, malnutrition, 21/20,2% of HPW - loss of documents, difficulty of access to health care, 25/24% of HPW -active continuation, due to despair, drug use and other 20/19, 2% HPW - the need to take antiretroviral drugs at certain hours, not allowing passes, 7/6,7% HPW - the need for food restrictions, 43/41,3% HPW - decreased physical activity, 19/18,3% HPW -fatigue from the forced use of antiretroviral drugs, 17/16,3% HPW - side effects of highly active antiretroviral therapy, 3/2,9% HPW - a sense of "strange medicinal smell" from one's own body, aversion to one's own body, 6/5,8%, VPN held ineffective antiviral therapy, 4/3,8% of HPW the appearance of visible defects in appearance, 2/1,9% of HPW - knowing the terminal stage, the struggle with pain, asthenia.

Among HPW, 37/35.6% maintained the ability to perform their daily household, social and professional duties; 58/ 55.8% of HPW experienced difficulties with these duties, and 10/ 9.6% of HPW failed to perform these duties.

Conclusion

The majority of women who inject opioids have high level of social dysfunction, reporting failure to perform domestic, social and professional duties. In in FIOU with HIV-positive status these problems are more pronounced.

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