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Treatment of tobacco dependence among HIV-infected patients: rationale and preliminary actions taken in Poland

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ABSTRACT

Tobacco smoking and non-communicable diseases related to tobacco use are currently the most important health challenges in population of HIV positive patients, also in Poland. Treatment of tobacco dependence in HIV-infected individuals is now emerged as one of the most important areas for clinical care. One of the rationale for intensifying smoking cessation efforts in HIV population comes from epidemiological observations suggesting that tobacco smoking is responsible for 7 years of life lost in HIV-infected smokers.

The Health Promotion Foundation in collaboration with the HIV specialised medical society in Poland has launched a multi-component programme aimed at reducing the prevalence of tobacco smoking in HIV population at least by half in the next years. The programme involves several activities: (1) research aimed at characterising the smoking epidemic among HIV positive patients in Poland; (2) assessment and capacity building in smoking cessation among healthcare professionals who treat HIV patients; as well as (3) formulation of recommendations for a comprehensive nationwide programme of tobacco dependence treatment in this group of patients in Poland.

KEY WORDS: treatment of tobacco dependence, HIV, smoking cessation, Poland, training for healthcare providers.

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INTRODUCTION

For many years now human immunodeficiency virus (HIV) infection has been viewed not as a terminal illness, but rather a chronic condition. Nowadays early diagnosis and modern antiretroviral treatment allowing patients to live a long, and otherwise healthy life. Antiretroviral medications block HIV replication so effectively that life expectancy of patients living with HIV almost equals that of non-infected popu-

lation [1]. Furthermore, the newest antiretroviral medications have almost no side-effects, resulting in good quality of life. Currently, the main challenges in clinical care for patients living with HIV is early aging, as well as concomitant diseases. The most important factors negatively affecting HIV patients are substance misuse, HCV or HBV co-infection, alcohol abuse and tobacco smoking [2]. The available data suggest that tobacco use is responsible for as much as 7 years of life lost in HIV-infected individuals [3].

Patients living with HIV require regular check-ups at HIV clinics every 2 to 3 months to have their medical results assessed and drugs dispensed if necessary. If hypertension, impaired glucose tolerance, diabetes or dyslipidaemias are diagnosed (early aging secondary to chronic inflammation), necessary treatment is initiated as soon as possible. Sometimes the treatment benefits observed among HIV-positive patients are even larger than among the non-infected patients, who quite often avoid regular check-ups with their family doctors. In the recent years, increasing numbers of hepatitis C patients have been treated successfully (including elimination of the virus) thanks to the advent of the newest and most efficacious generation of antiviral drugs.

Therefore, tobacco use turns out to be the most important negative epidemiological factor affecting people living with HIV nowadays. Despite the described advances, smoking dramatically shortens lives. Unfortunately, many medical doctors still do not see it as an important risk factor that should be addressed in routine care. Benefits from smoking cessation, especially among patients living with HIV, can be enormous and lead to another public health breakthrough and further improvement in life expectancy and quality.

EPIDEMIOLOGY

According to the data from the National Institute of Public Health – National Institute of Hygiene, more than 21,000 HIV-infected people lived in Poland at the end of 2016 [4]. There is no sufficient data to precisely determine prevalence of tobacco smoking among HIV-positive patients, however, preliminary analyses have been done in Poland and there are available estimations from other countries. Data from epidemiological studies indicate that smoking prevalence is much higher in HIV-positive people than the general population. A study published in 2009, conducted by the Medical University of Warsaw, Department of Hepatology and Acquired Immunodeficiency, showed that, among 116 HIV-positive patients, 85% of women and 93.5% of men were smokers [5]. In the USA, prevalence of current tobacco smoking in people with HIV is estimated between 50% and 70% [6]. The disproportionate prevalence of smoking in HIV-infected people results in increasing rates of incidence and mortality due to cardiovascular, pulmonary and cancerous diseases not associated with HIV [6]. Results from a Danish nationwide, population-based cohort study of HIV patients, in which the effect of smoking on all-cause mortality and on risk of death caused by CVD and cancer was followed between 1995 and 2010, showed the proportion of current smokers more than twice as high among HIV-infected patients compared to the general population [3]. The study also showed that among smokers

with HIV the rate of non-AIDS-related deaths rose more than fivefold (with significantly increased risk of death from cardiovascular disease and cancer) and the loss of life-years due to tobacco smoking was larger compared to that associated with HIV infection. Tobacco-attributable deaths were more than 60% in the HIV cohort. Furthermore, the authors estimated that a 35-year-old HIV patient had a median life expectancy of 62.6 years (95% CI 59.9-64.6) for smokers and 15.8 years more for non-smokers (78.4, 95% CI 70.8-84.0) [3].

Taking into consideration high rates of smoking in the population of people living with HIV in Poland, there is an urgent need to develop and implement a comprehensive program addressing the burden of tobacco-related diseases in this particular population through the development and dissemination of effective smoking-cessation treatment.

TAKING ACTION

1: ASSESSING THE SMOKING EPIDEMIC

A programme aimed at treating tobacco dependence among HIV-infected patients should include both preventive and curative activities. The basis should be a reliable analysis of tobacco smoking among patients and incidence and death rates due to tobacco-related diseases in this population. Unfortunately, there is lack of sufficient data from cohort studies in Poland. The Health Promotion Foundation (HPF) has initiated collaboration with HIV medical specialists in Wrocław (“Podwale Siedem” Association and Department of Infectious Diseases, Liver Diseases and Acquired Immune Deficiencies at the Wrocław Medical University) and Łódź (Clinic and Department of Infectious Disease and Hepatology, Medical University of Łódź) to begin the data collecting necessary to assess tobacco smoking in patients with HIV.

The collaborative group will survey HIV-infected patients to obtain characteristics of smokers, their history of smoking, attitudes towards tobacco smoking and quitting, behaviours related to smoking and effectiveness of treatment of tobacco dependence. Results from the survey will contribute to tobacco-dependency data regarding HIV-infected patients and will be the basis for preparing a programme of diagnosis and smoking cessation dedicated to this population. In the first phase of the project, a questionnaire and study protocol have been prepared and approval from the ethics committee has been obtained. The questionnaire has been piloted, updated and is being currently implemented. To date a pilot study has been conducted among approximately 150 HIV patients. The study plan is to recruit a further 300 to 500 patients by the end of 2017.

Results from the survey will inform the next stage of the program contribute to tobacco-dependency data regarding HIV-infected patients and will form the ba-

sis for preparing a programme of routine diagnosis and smoking cessation targeted to this population.

2: CAPACITY BUILDING AMONG HEALTHCARE PROFESSIONALS

Another important area of activity is education and capacity building of medical doctors and nurses involved in treating HIV-infected patients, which addresses, amongst others the health consequences of tobacco smoking and evidence-based treatment of tobacco dependence. In 2016, the HPF launched a pilot project aimed at building the competence of doctors and nurses in preventing lung cancer and other tobacco-caused diseases among HIV-infected patients and those living with AIDS. These activities were conducted in collaboration with Foundation's long-time partner – the Polish AIDS Society.

In the first phase of the training program, dedicated tools and materials have been prepared by experts in HIV treatment. Then, a training workshop on diagnosing and treating tobacco dependence for medical doctors and other healthcare providers who treat patients with HIV was organised in Łomnica, Poland. Participants completed two questionnaires: one assessing participants' knowledge of tobacco dependence treatment before the training, and a second, for the doctors, assessing their experience and attitudes towards smoking and tobacco dependence treatment. After the workshop, questionnaires were distributed to evaluate change in knowledge and to evaluate the training program in general.

The main aim of the preliminary survey administered during the workshop was to assess baseline knowledge among participants. Questions assessed the harmfulness of smoking, tobacco diseases, the role of psychological support during tobacco addiction treatment and medicines used in the treatment process. Results showed a low level of knowledge on the association between tobacco smoking and related diseases. Twenty-five percent of the participants knew that tobacco dependence is a disease classified in the International Statistical Classification of Diseases and Related Health Problems [7]. Only half of them answered correctly the question about the number of carcinogens in tobacco smoke. Seven percent were unaware of the role of psychological support during tobacco dependence treatment and considered behavioural support unnecessary while using pharmacotherapy, which is not in accordance with recommendations. Knowledge of cessation medicines available on the Polish market was also insufficient. Tabex and Desmoxan were incorrectly indicated as nicotine substitutes. The cytosine and varenicline mechanism of action was known by a low number of respondents (19%). A fourth of medical doctors who treat patients with HIV was unaware that quitting smoking can extend patients' lives for few years. The post-workshop

assessment has showed improvements in knowledge on smoking and cessation treatment.

Regarding delivery of individual components of cessation treatment by medical doctors specialising in HIV treatment: half of them talk with their patients about tobacco smoking, but only 19% do so during each medical visit. About 13% of doctors counsel on tobacco addiction only if the patient raises the subject. The most common interventions were: advising on smoking cessation (88%), determining the number of cigarettes smoked, noting smoking status in the patient's file, and explaining the health consequences of tobacco use (63%). However, a specialised smoking cessation clinic was recommended only by 13% of doctors. The survey results showed that one of the biggest obstacles in working with tobacco-addicted patients was patients' low motivation to quit, lack of proper skills, lack of time and small number of specialised smoking cessation clinics.

Participants described the workshop as a substantial element that should be incorporated into HIV treatment procedure. They commented that knowledge on smoking cessation and treatment of tobacco dependence gained at the workshop is necessary and should be part of doctors' daily routine. Most respondents (71%) thought Polish AIDS Society guidelines on how to help smoking HIV persons should be expanded, and 79% requested elaboration of the consensus on diagnosis and treatment of tobacco dependence among HIV-positive patients.

In the guidelines of the Polish AIDS Society on principles of health care among HIV-infected patients [8] one chapter describes basic activities aimed at smoking cessation. Its author mentions a method of minimal intervention and recommends assessing during each medical visit the patient's attitude towards smoking and smoking behaviour. Every patient should be motivated by his doctors to quit, as tobacco-caused diseases substantially reduce the efficacy of antiretroviral therapy in patients living with HIV. However, further detailed information on methods of treatment were limited to a few itemised medicines used to quit: nicotine substitutes, varenicline, bupropion (no information on cytosine) and information on the option to refer the patient to psychotherapists providing individual or group cognitive behavioural therapy or motivational interviewing.

3: PREPARING COMPREHENSIVE CESSATION TREATMENT GUIDELINES FOR HIV PATIENTS

The final phase of the project is preparing a report with recommendations for doctors and nurses, and creating a website dedicated to the project and dissemination activities. Preliminary conclusions were presented at scientific conference at the Wrocław Medical University, on 29 May 2017, on the occa-

sion of the WHO World No Tobacco Day, and at an accompanying press conference.

CONCLUSIONS

In the era of long-term survival among HIV-positive patients, new challenges arise. Although many such patients will remain otherwise healthy into old age, those who smoke have increased risk of developing tobacco-caused diseases and dying prematurely. Antiretroviral therapy is efficient but cannot alone ensure longevity. People living with HIV must maintain a healthy lifestyle, and those who smoke must quit in order to reduce risks to their health and improve their quality of life.

The fact that HIV-positive patients need to be regularly supervised by their medical doctors provides an opportunity to monitor their behaviours, especially tobacco smoking, and offer essential counselling and support during a quit attempt. Further activities are needed in Poland to engage more doctors in frequent smoking cessation support and motivate them to treat tobacco dependency along with HIV in their daily medical routine. The first step would be to develop a comprehensive national program on the treatment of tobacco dependence in HIV-positive patients, including consistent guidelines for medical doctors and nurses. To achieve this, it's necessary to continue conducting research and providing more educational activities both for healthcare providers and patients.

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DISCLOSURE

Authors report no conflicts of interest.

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AUTHOR'S CONTRIBUTIONS

All authors contributed to preparing the concept of the publication, critically revised and finally approved it. KJK collected data and wrote the article.