

Micro-elimination of hepatitis C in the incarcerated population: is it really possible?

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Received: 11 March 2020

Accepted: 5 March 2021

ABSTRACT – According to the World Health Organization, 71 million people live with chronic hepatitis C. The treatment of this disease requires assistance from specialized physicians and a highly complex health care system. The prison population has been recognized as being at a high risk of acquiring confinement-related infections, including viral hepatitis. Hepatitis C virus (HCV) infection is a primary cause of death owing to liver disease among liberty-deprived individuals. Generally, prisons do not have adequate isolation wards for persons with communicable diseases, and overcrowding is a risk factor for this population. Besides prison overcrowding, violence, poor sanitary conditions, low socioeconomic status, social isolation, and emotional instability are factors that can lead detainees to adopt unhealthy habits that make them more susceptible to infections, including HCV, and complicate effective treatment. The Criminal Execution Law 7, 210 of July 11, 1984, in Article 14, grants preventive and curative medical, dental, and pharmacological healthcare to detainees. However, adequate hepatitis C treatment is rarely provided at prisons owing to social stigma and lack of knowledge on the severity of this condition or because most detainees are unaware of their condition. Given the multiple limitations imposed by the prison system model, implementing measures to treat diseases effectively is challenging. However, it is possible to eliminate hepatitis C in prisons in the long term through the coordinated action of public health institutions and the prison system.

Keywords – Hepatitis C; prisons; communicable diseases.

According to the World Health Organization (WHO), 71 million people were living with chronic hepatitis C, of whom only 27 million (10%) were aware of their condition in 2017⁽¹⁾. According to the Ministry of Health of Brazil, approximately 60–70% of hepatitis C virus (HCV)-infected individuals will develop chronic liver disease, requiring specialized healthcare and the support of a highly complex healthcare system^(2,3). Unlike the sexual infection route and vertical transmission, which are rare in HCV infection, viral transmission occurs mainly through contact with infected blood (through sharp objects), given the high viral concentration in this body fluid⁽⁴⁾.

The prison population is at a remarkably high risk of contracting infections associated with confinement conditions, including viral hepatitis. Imprisoned individuals are marginalized, and the use of illegal drugs is widespread in prison settings⁽⁵⁾. Several factors favor the dissemination of highly prevalent infections such as hepatitis C within prison inmates. Sharing sharp objects, piercing materials, tattoo needles, and the use of injectable drugs are practices associated with the dissemination of HCV within prisons⁽⁶⁾. Besides the precarious conditions of confinement, the lack of knowledge regarding the transmission of infectious diseases and long imprisonment periods result in a high prevalence of hepatitis C in prisons⁽⁵⁾.

HCV is one of the primary causes of death due to liver disease in incarcerated individuals. Prisoners who were already infected with HCV at the time of arrest become a source of infection, dissemination, and maintain HCV circulation within prisons⁽⁷⁾. In addition, there are no epidemiological screening protocols upon the entry of new detainees, which would prevent new infections and

the aggravation of pre-existing cases⁽⁸⁾. Thus, HCV dissemination is facilitated, and the separation between sick and healthy inmates is virtually impossible.

The National Penitentiary Department states that, according to the Penitentiary Information System (InfoPen), there was an average increase of 7.14% per year in this population since the number of incarcerated persons went from 232,000 in 2000 to 726,000 in 2017. Furthermore, during the first half of 2017, there was an increase of approximately 0.59% in the number of incarcerated persons in the prison system⁽⁹⁾. Prison overcrowding, violence, poor sanitary conditions, low socioeconomic status, and social isolation can lead detainees to adopt unhealthy habits and unsafe practices, leaving them vulnerable to infections and complicating effective treatment⁽¹⁰⁾.

It is important to note that this growing prison population was not accompanied by the expansion of penitentiary facilities. Statistical data from the National Penitentiary Department show that Brazil has 1,507 facilities with a total of 423,242 listed vacancies for a prison population of over 726,000 people⁽⁹⁾. It means that all Brazilian states have a vacancy deficit in their prison systems. Prison overcrowding complicates drug administration and patient adherence to effectively treat diseases⁽¹¹⁾.

Furthermore, besides overcrowding, factors such as poor sanitary conditions, minimal infrastructure, and lack of human resources in prison units further complicate the situation⁽¹¹⁾. The difficulty in implementing health-oriented actions can be attributed to the small number of public security agents in prisons, impossibility of granting safety of the people involved in these actions, and lack of knowledge of health professionals about the precarious reality of prison systems⁽¹²⁻¹³⁾. In addition, prison outpatient clinics

Declared conflict of interest of all authors: none

Disclosure of funding: no funding received

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are poorly managed and do not provide adequate medical care, which also facilitates disease transmission⁽¹⁴⁾.

The Criminal Execution Law 7, 210 of July 11, 1984, in Article 14, grants preventive and curative healthcare to detainees and covers medical, pharmaceutical, and dental care⁽¹⁵⁾. Therefore, in cases where the prison lacks the infrastructure or instruments to provide appropriate healthcare, the detainees can be referred to an outside health center to receive proper treatment. Unfortunately, in reality, the Brazilian prison system does not always comply with the legislation, hindering access to medical care for prisoners infected with HCV⁽¹⁶⁾.

Even during incarceration, prisoners have contact with the outside through visits, prison staff, and special situations such as Christmas release, which contribute to the spread of diseases, such as hepatitis C, inside and outside the prison, since the source of infection may also be external and unidentified⁽¹⁰⁾. Moreover, adequate treatment of infectious diseases in prisons is challenging owing to social and educational reasons and because most detainees are unaware of their condition⁽¹⁰⁾. Additional barriers preventing effective treatment include individual factors (drug abuse and emotional stress), social factors (discrimination, difficulty in relationship with health professionals), and temporal factors, since several prisoners remain incarcerated for extended periods, making it difficult to complete treatment⁽¹⁰⁾.

When analyzing the precarious reality of some penitentiaries in Brazil, Silva et al. concluded that these facilities are extremely deficient in infrastructure, especially public prisons in which cells have been converted into improvised infirmaries. Even if medical equipment (such as stretcher and dental chair) is available, these prisons lack trained and qualified staff for medical consultations⁽¹⁷⁾. The current status of the prison system has multiple structural limitations and lacks the necessary conditions to take actions aimed at improving the inmate's access to adequate health services⁽¹³⁾.

However, it is possible to eradicate hepatitis C in prisons in the long term through the promotion of healthcare projects with this purpose and collaboration between public health institutions and the state prison system. To achieve this goal, prison health projects must perform broad hepatitis C screenings (using rapid anti-HCV tests, for example) followed by confirmatory tests (HCV-RNA detection and viral load determination), liver disease examination (transaminases, bilirubin, albumin, alpha-fetoprotein, and

abdominal ultrasonography), and assessment of HIV co-infection according to the clinical protocol and therapeutic guidelines for hepatitis C and Co-infections from the Ministry of Health of Brazil⁽³⁾. In case imaging-based analyses are challenging (owing to the transportation of prisoners), it should be acceptable to follow treatment protocols solely based on the results of blood tests. Furthermore, given that there are hepatitis C therapeutic schemes that target specific HCV genotypes, pangenotypic drugs should be used to facilitate and shorten the time until treatment initiation, thus leading to effective treatment in this particular population.

Besides the previously described action protocol and the continuous promotion of preventive measures against HCV transmission in prisons, these actions must include not only the prison population but also staff members and frequent visitors. Thus, well-trained prison staff and medical staff outside prison settings are necessary, given that they both contribute to the micro-elimination of hepatitis C in incarcerated people.

In conclusion, the micro-elimination of hepatitis C in the incarcerated population will only be possible with the coordinated action of organizations responsible for health promotion and the commitment of public health institutions. The former have to promote educational campaigns on hepatitis C prevention in prisons, and the latter need to facilitate hepatitis C diagnosis and treatment in the prison population.

ACKNOWLEDGEMENTS

The authors would like to thank the general director and all the medical and prison staff at *Penitenciária Estadual Dr. Francisco Nogueira Fernandes (Alcaçuz)*, Rio Grande do Norte, Brazil.

Authors' contribution

Queiroz IT: contributed to conceptualization, methodology, administration and supervision of the entire project. Couras S and Cabral D: both contributed to writing original draft. Queiroz IT: contributed to reviewing and editing the final text.

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Queiroz IT, Couras S, Cabral D. Microeliminação da hepatite C na população carcerária: realmente possível? *Arq Gastroenterol.* 2021;58(3):399-401.

RESUMO – De acordo com a Organização Mundial da Saúde, 71 milhões de pessoas vivem com hepatite C crônica. O tratamento dessa doença requer assistência de médicos especializados e um sistema de saúde de alta complexidade. A população carcerária tem sido reconhecida como sendo de alto risco de adquirir infecções relacionadas às condições de confinamento, incluindo hepatites virais. O vírus da hepatite C (VHC) é uma causa primária de morte por doença hepática em pessoas privadas de liberdade. Geralmente, as prisões não possuem locais adequados para isolamento de pessoas com doenças transmissíveis e a superlotação é um fator de risco para essa população. Além da superlotação das prisões, violência, más condições sanitárias, baixo nível socioeconômico, isolamento social e instabilidade emocional são motivos adicionais que induzem os detidos a praticar hábitos não saudáveis, que os tornam mais suscetíveis a certas infecções (incluindo VHC) e complicam o tratamento específico. A Lei de Execução Penal n. 7.210, de 11 de julho de 1984, em seu artigo 14, garante assistência preventiva e curativa à saúde, incluindo assistência médica, farmacêutica e odontológica aos detidos. No entanto, o tratamento adequado da hepatite C é raramente fornecido nas prisões devido estigma social ou falta de conhecimento de sua condição ou porque a maioria dos detidos não tem conhecimento de sua condição. Devido a múltiplas limitações impostas pelo modelo prisional, a implementação de medidas para o tratamento eficaz de doenças é desafiadora. No entanto, é possível eliminar a hepatite C em um ambiente prisional de longa permanência através de ações coordenadas de instituições de saúde pública e o sistema prisional.

Palavras-chave – Hepatite C; prisões; doenças transmissíveis.

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