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Editorial

Elimination of hepatitis C virus in Spain: A pending challenge[☆]

Eliminación del virus de la hepatitis C en España: un reto pendiente

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Chronic infection from hepatitis C virus (HCV) continues to be a big public health problem affecting approximately 71 million people in the world, according to the latest estimates by the World Health Organisation (WHO).¹ The disease load from the virus over recent years has been tremendous, and it is one of the main causes of cirrhosis and hepatocellular carcinoma, and the main cause of liver transplants in countries with large economic resources.² According to data from the Centres for Disease Control and Prevention, from 2003 to 2013 the number of deaths related to HCV in the USA exceeded those caused by the other 60 nationally confirmed infectious diseases combined, including HIV.³

Fortunately, the therapeutic revolution of the anti-HCV direct acting antivirals (DAAs), which are nearly 100% effective with the new combinations,^{4,5} is providing a turning-point in HCV-related morbidity/mortality rates. This is reflected by the liver transplant records in some countries, with a decrease in the number of patients on the waiting list for or having received a liver transplant for end-stage liver disease or hepatocellular carcinoma due to HCV.⁶ If we consider the clinical impact of these treatments and their current cost, universal treatment of HCV with DAAs will certainly be a strategy which will reduce the health costs in the medium and long term.⁷

Access to such perfect treatments has been one of the main reasons for the WHO implementing a strategy to eliminate viral hepatitis strains throughout the world, with a set of objectives for 2030 which include the diagnosis of 90% of prevalent infections, a 90% reduction in incident infections and a 65% decrease in liver-related mortality.⁸ Interventions to combat infectious diseases at a populational level may have various objectives: control, elimination, eradication and extinction.⁹ Today, only smallpox has been eradicated, although it is not extinct as there are strains of the virus stored in laboratories in the USA and Russia. Elimination involves reducing the incidence of an infection in a geographical area to zero, as a result of continual intervention measures to avoid the renewal of transmission. Examples which are often cited are measles and

polio. Control, which is less ambitious than elimination, involves reducing the incidence, prevalence, morbidity or mortality rates of the infection to an acceptable level.⁹ Like that used for other infectious agents, the strategy to eliminate HCV is based on three basic pillars: prevention, diagnosis of prevalent infections and universal access to treatment.¹⁰ The task is not free from obstacles, given the infection's long period of infection and transmissibility and the absence of a vaccine, but there are favourable circumstances such as having an exclusively human reservoir and the existence of reliable diagnostic tests and very effective and safe treatments which can break the transmission chain. There is not one single strategy to eliminate HCV which is applicable to all countries, given that the epidemic presents significant differences between the different areas of the world in aspects such as prevalence, main acquisition mechanisms, ethnic groups which are most affected, size of the undiagnosed proportion, proportion of patients with advanced liver disease, socio-economic level, type of health system and access to treatment.¹¹

In Spain, as in most countries, knowledge of HCV epidemiology is far from perfect. A review of the different studies carried out in Spain between 1994 and 2004 concluded that the prevalence of antibodies against HCV in our country ranged between 1.6 and 2.6%.¹² Subsequently, in another study carried out in the Madrid community in 2008 and 2009, the prevalence of antibodies against HCV among the 16 0 year-old population was 1.8%, with a higher prevalence among those born between 1948 and 1968.¹³ With regard to the undiagnosed proportion, a 2013 estimate putting the proportion of patients infected with HCV diagnosed in Spain at 40% has been given validity in recent years.¹¹

In this issue of *Enfermedades Infecciosas y Microbiología Clínica*, Aguinaga et al. publish the results of a study carried out in Navarra between 2014 and 2015, in which the prevalence of HCV infection in the population covered by the public health network in that region (97% of the total population) was estimated.¹⁴ For the study, the researchers chose patients on the waiting list for scheduled interventions in Maxillofacial Surgery, Plastic Surgery, Otorhinolaryngology, Ophthalmology and Cardiac Surgery, as in their view these were the individuals who were most representative of the general population and less biased with regard to their possible HCV infection. The sample was of 7378 patients and antibodies against HCV were detected in 69, which is a prevalence of 0.83%.

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Of the seropositive patients, 97% had previously tested positive and only 2 patients (0.3%) tested positive for the first time, which gives an undiagnosed HCV infection prevalence of 0.03%. The active populational infection prevalence in this study was 0.51%.

The results of this study differ from the findings in another with a populational base carried out in 2015 and 2016 in Cantabria, Madrid and Valencia, reported by Cuadrado et al. at the 42nd Congreso Anual de la Asociación Española para el Estudio de Enfermedades Hepáticas [Annual Congress of the Spanish Association for the Study of Liver Diseases].¹⁵ In this 2015/2016 study, seroprevalence against HCV was 1.2%, with figures higher among patients born between 1945 and 1965. The HCV active infection prevalence was 0.31%, and 31% of viraemic patients were unaware of their status.¹⁵

The studies carried out by Aguinaga et al. and Cuadrado et al. show significant differences not only in their design, but also in their results, particularly when it comes to estimating the undiagnosed proportion infected with HCV. The results of these 2 studies would serve as a basis for the design of very different strategies for eliminating HCV in our country. Based on the results from the Aguinaga et al. study,¹⁴ the very low percentage of undiagnosed infections would justify a selective screening system aimed at high-risk groups to be implemented, rather than a universal screening system, which would be justified with the results of the Cuadrado et al. study.¹⁵

In Spain, the 21 May 2015 Strategic Plan for approaching hepatitis C in the National Health System covered 4 strategic lines with different concrete actions, one of which was to carry out a hepatitis C seroprevalence survey in the adult population.¹⁶ The Ministry's Department of Public Health, Quality and Innovation has reported that the fieldwork for this study was carried out last year with a sample size of 10,000 people recruited in all autonomous communities. The project is currently in the data-processing phase and more information will become available from it in the first half of 2018.¹⁷ This is certainly good news, because having up-to-date, reliable information on the prevalence of HCV infection, and particularly on the undiagnosed proportion, will allow efficient strategies to be designed to eliminate the virus in Spain, and will serve as a basis to choose the most suitable type of screening.¹⁸

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