



Editorials

The bidirectional relationship between viral hepatitis infections and work



La relación bidireccional entre las infecciones por hepatitis virales y el trabajo

Work is a complex activity that can be assessed in several ways: as a productive endeavour, a sociological phenomenon, an economic function, and so forth. This number of Annals of Hepatology takes an interesting approach to work from the perspective of health and biological diseases. It contains two papers on both sides of the coin: Cordeiro TMSC, et al. [1], from Brazil, offer an enlightening description of viral hepatitis infection in relation to occupational activities and de Ledinghen V, et al. [2], from France, analyze the association between reduced productivity and hepatitis C virus infections.

Viral infections linked to occupational activities have acquired considerable relevance, particularly in Brazil, where 1493 such infections have been reported over the past seven years. It is important to consider, however, that the sources of infection were detailed in only half of the cases in the original dataset of the study of interest, and that some degree of under-reporting was noted by the authors.

Exposure to accidents with biological materials has emerged as the principal risk factor for contracting hepatitis B and C virus. This matches the results of a recent meta-analysis in which the prevalence of hepatitis C infection was markedly high in health care workers worldwide [3]. Minimal information – including two manuscripts from Brazil – exists on this subject in Latin America.

This reveals a dearth of available information on infections transmitted by accidents in the work environment. It also highlights the prominent role of health systems in the development of a standardized registration mechanism for preventable accidents.

Besides installing such a mechanism, it is necessary to undertake a comprehensive assessment of work-related infections as a basis for identifying risk factors and designing effective preventative interventions.

This is a critical issue for all countries given the mounting demographic changes induced by sociopolitical developments, of which migration is a striking example. Massive population movements are modifying the epidemiological indicators for infectious diseases worldwide [4].

On the other hand, the enclosed analysis of 1269 patients with hepatitis C infection, including an assessment of the impact of the disease on their quality of life and work productivity, contributes notable findings. For instance, the prevalence (32%) and magnitude

(≥50%) of the reduction in the work activity of these individuals was significantly high, particularly among those with fatigue. Impaired productive activities and absenteeism related to hepatitis C infection exert a profound economic impact.

Given the scenario described above, the use of interferon-free treatments can be of use in reducing the economic impact of hepatitis C infection [5]. However the real cost (or savings) resulting from this should be carefully analyzed by country, taking into account the epidemiological and economic characteristics of each one.

Both papers enclosed in this number clearly illustrate the relationship between hepatitis virus infections and work, shedding light on their complex interactions and bidirectional influence.

However, our excitement over the development of new treatments for hepatitis C virus infection should be matched by committed efforts to analyze unexpected acquired infections and to craft preventative tools for the protection of our patients and colleagues.

References

- [1] Cordeiro TMSC, Ferreira Filho RP, D'Oliveira Júnior A. Factors associated with occupational and non-occupational viral hepatitis infections in Brazil between 2007–2014. *Ann Hepatol* 2019, <http://dx.doi.org/10.1016/j.aohep.2019.03.009>.
- [2] de Ledinghen V, Hanslik B, Moussalli J, Ahmed SNS, Ouzan D, Larrey D. Hepatitis C virus infection impacts work productivity and fatigue: An epidemiologic real-life study. *Ann Hepatol* 2019, <http://dx.doi.org/10.1016/j.aohep.2019.04.015>.
- [3] Westermann C, Peters C, Lisiak B, Lamberti M, Nienhaus A. The prevalence of hepatitis C among healthcare workers: a systematic review and meta-analysis. *Occup Environ Med* 2015;72(12):880–8.
- [4] Tuite AR, Thomas-Bachli A, Acosta H, Bhatia D, Huber C, Petrusek K, et al. Infectious disease implications of large-scale migration of Venezuelan nationals. *J Travel Med [Internet]* 2018;25(1). Available from: <http://www.ncbi.nlm.nih.gov/pubmed/30192972> [cited 02.07.19].
- [5] Cacoub P, Bourliere M, Asselah T, De Ledinghen V, Mathurin P, Hézode C, et al. French patients with hepatitis C treated with direct-acting antiviral combinations: the effect on patient-reported outcomes. *Value Heal* 2018;21(10):1218–25.

Norberto Chavez-Tapia

Medica Sur Clinic and Foundation, Mexico City,
Mexico

E-mail address: khavez@gmail.com

Available online 12 July 2019