

Screening for hepatitis C viral infection in a non-urban primary care facility in Flanders

X. Verhelst, G. Devolder, M. De Wilde, L. Goderis, A. De Bel, E. Spillebeen, A. Geerts, A. Derese, H. Van Vlierberghe
Ghent University Hospital, Hepatology and gastroenterology, Gent, Belgium.

To the editor,

Chronic Hepatitis C virus (HCV) infection is a major cause of liver cirrhosis and hepatocellular carcinoma (1). We performed an opportunistic HCV screening study in a primary care facility in Lendelede (Belgium) in patients undergoing blood examination for another medical reason. The aim of this study was to analyze the prevalence of chronic HCV infection in a non-urban primary care facility and analyze risk factors for HCV infection in this cohort. All adult patients undergoing blood examination were offered HCV antibody testing. Patients were included between 1 November 2016 and 1 October 2017. Patients answered a questionnaire for the presence of risk factors and HCV antibody testing was performed in one central laboratory (Medisch Labo Bruyland, Kortrijk) using the Elecsys Anti-HCV antibody test (RocheDiagnosticsGmbH, Mannheim, Germany). If positive, active viral replication was confirmed by HCV RNA testing. The study was approved by the Ghent University Hospital Ethical review board. During one year, 560 patients were screened for HCV infection (Male : n= 219; Female : n= 341). Mean age was 51 years (18-92 years). In the male patients, 1.8% reported sex with other men (MSM). Two patients reported illicit drug use but no intravenous drug use. Sixteen patients (2.9%) were not born in Belgium. In this cohort, 5 patients (0.89%) showed positive HCV antibodies. Active viral replication was revealed in 3 patients (0.54%). Details are summarized in table 2. Only one of these patients is part of the so-called babyboom generation (1/156 versus 4/400, p value non-significant; Mann Withney U test). One patient was known with HCV infection before the screening was performed. Two patients with active viral replication were referred to a hepatologist for treatment. The 89 year old woman was not referred due to her age.

These data highlight the need of screening campaigns for HCV infection, as even in this low-risk cohort seroprevalence was close to 1%, including 60% patients with active viral replication. Four out of 5 of these patients would have been identified using targeted screening for risk groups as defined in table 1. However, this opportunistic screening was performed in the daily routine of a primary care facility and the concept of the non-targeted once-in-a lifetime screening allowed for the inclusion of a large number of patients, as the burden

Table 1. — Risk factors for HCV infection

Persons who had following medical events in Belgium before 01.07.1990 :
◦ blood transfusion, major surgical procedures (cardiac, vascular, digestive, pulmonary, gynaeco-obstetric, orthopaedic,...)
◦ stay in intensive care unit including neonatal intensive care unit
◦ difficult parturition
◦ digestive bleeding
◦ tissue, cell or organ transplantation
Dialysis patients
Persons who were drugs users by intravenous or intranasal route
Children from mothers seropositive for HCV
Sexual partners and household members of patients with HCV
Persons who had tattoos, piercing, acupuncture without use of single use or personal equipment
Persons who had medical care in countries with high prevalence of HCV (South East Asia, Middle East, Africa, South America)
Persons with unexplained elevations of transaminases
Patients seropositive for HIV or HBV
Persons with unexplained asthenia
Persons with history of unexplained jaundice

Table 2. — Overview of patients with HCV antibodies

	Age	Sex	Risk Factor	Babyboom Generation	HCV RNA
1	27	Male	MSM	No	Negative
2	78	Male	Orthopedic surgery	No	Positive
3	59	Female	Blood transfusion	Yes	Positive
4	29	Female	None	No	Negative
5	89	Female	Blood transfusion	No	Positive

Legend : MSM : men having sex with men

caused by this screening for the primary care physician was very low.

A matter of debate is the value of targeted HCV screening in the so-called babyboom cohort, born between 1945 and 1965. There are no data that support this strategy in the Belgian population, and this work adds to our former work (3), that babyboom screening in Belgium is not a sufficient approach to identify patients with HCV. We rather advocate a once-in-a-lifetime screening for everybody. The primary care physician could and should play a key role in this story.

Correspondence to : Xavier Verhelst, UZ Gent, Dept of Gastroenterology and hepatology, Corneel Heymanslaan 10, 9000 Gent, Belgium.
E-mail : xavier.verhelst@uzgent.be

Submission date : 06/09/2018
Acceptance date : 16/11/2018

References

1. RAZAVI H, ROBBINS S, ZEUZEM S. *et al.* Hepatitis C virus prevalence and level of intervention required to achieve the WHO targets for elimination in the European Union by 2030: a modelling study. *Lancet Gastroenterol. Hepatol.*, 2017, **2** : 325-336.
2. PAWLITSKY J-M, NEGRO F, AGHEMO A. *et al.* EASL Recommendations on Treatment of Hepatitis C 2018. *J. Hepatol.*, 2018, **69**(2) : 461-511.
3. BOTTERMAN R, GLORIEUS E, LEFERE S. *et al.* Do or don't: HCV screening in the Belgian Baby Boom cohort. *Acta Gastroenterologica Belgica*, 2017, **80**(1) : A010.