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BRIEF ORIGINAL

Viral hepatitis and immigration: A challenge for the healthcare system☆,☆☆

J.A. Cuenca-Gómez[a,*], J. Salas-Coronas[a,c], M.J. Soriano-Pérez[a], J. Vázquez-Villegas[b], A.B. Lozano-Serrano[a], M.T. Cabezas-Fernández[a,c]

[a] *Unidad de Medicina Tropical, Hospital de Poniente, El Ejido, Almería, Spain*
[b] *Unidad de Medicina Tropical, Distrito Poniente, Almería, Spain*
[c] *CEMyRI (Centro de Estudio de las Migraciones y Relaciones Interculturales), Universidad de Almería, Almería, Spain*

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Abstract
Background: Viral hepatitis is a significant health problem in African countries. The increase in the immigrant population from this continent represents a challenge for the Spanish healthcare system.
Material and methods: A descriptive study was conducted on the prevalence of the serological markers of hepatitis B (HBV), C (HCV) and D (HDV) in African immigrants treated in a specialised doctor's office.
Results: The study included 2518 patients (87.7% Sub-Saharan natives), with a mean age of 31.3 years. Some 78.8% of the patients had a positive infection marker for HBV, and 638 patients (25.3%) were diagnosed with active hepatitis B (HBsAg+). In 19 cases, antibodies against HDV were detected (4 cases with detection of the viral genome). Sixty-eight patients had antibodies against HCV, 26 of whom had a positive viral load.
Conclusions: The high prevalence of viral hepatitis in immigrants, especially HBV infection, represents a significant change in the profile of patients treated in Spain and requires measures aimed at early diagnosis and transmission prevention.

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* Corresponding author.
E-mail address: jacuencag@gmail.com (J.A. Cuenca-Gómez).

PALABRAS CLAVE
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Hepatitis virales e inmigración: un reto para el sistema sanitario

Resumen
Introducción: Las hepatitis virales representan un importante problema de salud en los países africanos. El incremento de la población inmigrante procedente de este continente supone un reto para el sistema sanitario.
Material y métodos: Estudio descriptivo sobre la prevalencia de marcadores serológicos de hepatitis viral B (VHB), C (VHC) y delta (VHD) en inmigrantes africanos atendidos en una consulta especializada.
Resultados: Se incluyó a 2.518 pacientes (87,7% subsaharianos) con una edad media de 31,3 años. El 78,8% presentó algún marcador positivo de infección por el VHB y en 638 pacientes (25,3%) se diagnosticó una hepatitis B activa (AgHBs+). En 19 casos se detectaron anticuerpos frente al VHD (4 con detección del genoma viral). Sesenta y ocho pacientes presentaron anticuerpos contra el VHC, de los que 26 tenían carga viral positiva.
Conclusiones: La elevada prevalencia de hepatitis virales en inmigrantes, en especial la infección por VHB, ha supuesto un cambio significativo en el perfil de pacientes atendidos en nuestro país, y precisa de medidas encaminadas a un diagnóstico precoz y prevención de la transmisión.

Introduction

It is estimated that more than 240 million individuals worldwide are infected by the hepatitis B virus (HBV).[1] Of these, between 15 and 20 million are coinfected with the hepatitis delta virus (HDV).[2] Between 130 and 150 million individuals have a chronic infection by the hepatitis C virus (HCV).[3] In Western countries, the number of infected individuals has declined significantly thanks to the implementation of HBV vaccination and to the surveillance of blood designated for transfusions.[4] However, the high immigration rates experienced by many of these countries in recent years have led to a substantial increase in these diseases, causing a public health problem.[5] In the province of Almeria, specifically the area of Poniente, there is a large group of African immigrants, which can exceed 30% of the population in many municipalities.

The aim of this study is to determine the prevalence of the serological infection markers of HBV, HCV and HDV in African patients treated at a specialized consultation.

Material and methods

A descriptive study was conducted on the serological markers of HBV, HCV and HDV in African patients treated in the Tropical Medicine Unit of Hospital of Poniente (Almeria, Spain) between October 2004 and June 2015. All patients underwent a medical history review and complete physical examination. Laboratory tests were requested with hemogram, renal and hepatic function and, if not previously performed, HBV, HCV and HIV serology. Patients with HIV infection were referred to a specialized medical office and were therefore excluded from the study. For hepatitis B, the hepatitis B surface antigen (HBsAg), core antibodies (HBcAb) and surface antibodies (HBsAb) were measured. When the presence of HBsAg was detected, the envelope antigens (HBeAg) and antigen antibodies (HBeAb) were measured. In the event of suspected acute infection, IgM HBcAb levels were measured. The condition of chronic hepatitis B virus carrier was defined as the presence of HBsAg in 2 measurements separated by a minimum of 6 months. For the patients who showed HBcAb as the only marker, a past infection was considered if the patient had normal transaminase levels. If these levels were high, a polymerase chain reaction (PCR) on the HBV was performed to rule out viral replication as an indication of occult hepatitis B (OHB). The presence of HBsAb with no other serological markers was considered the result of HBV vaccination. For the patients with HBsAg, DNA quantification of HBV was performed using real-time PCR (COBAS AmpliPrep/COBAS TaqMan-Roche Diagnostics), with a limit of detection of 20 IU/mL. The HBV genotype was determined using partial magnification and sequencing of the gene that encodes the HBsAg (Abbott RealTime HBV). Inactive chronic carriers were defined as those patients with HBsAg(+) and HBeAb(+), a viral load less than 2000 IU/mL and persistently normal transaminase levels. The rest of the patients with HBsAg(+) were classified as chronic hepatitis B HBeAg(+) (HBeAb negative) and chronic hepatitis B HBeAg(−) (HBeAb positive).

For the patients who had HBsAg, the measurement of antibodies against HDV (ETI-AB-DELTAK-2 [total antibodies] and ETI-DELTA-IGMK-2 [class IgM antibodies]) was requested, which were performed using enzyme immunoassay (DiaSorin®). For those patients whose results were positive, the RNA of this virus was measured using molecular hybridization techniques.

The detection of anti-HCV antibodies was performed using chemiluminescence assays (Beckman-Coulter, DXI®). A Western Blot (BioRad®) confirmation system was used for the anti-HCV results between 1 and 4 IU/mL. The quantification of the HCV viral load was performed using