



SERVIZO
GALEGO
de SAÚDE

Complexo Hospitalario Universitario
de Santiago de Compostela
Santiago de Compostela



GRUPO DE ESTUDIO DE HEPATITIS
VÍRICAS - SEIMC

HEPATITIS E CRÓNICA EN PACIENTES INMUNODEPRIMIDOS TRASPLANTADOS DE ÓRGANO SÓLIDO: REVISIÓN A PROPÓSITO DE UN CASO

Antonio Aguilera

Servicio Microbiología CHUS (Santiago de Compostela)

antonio.aguilera.guirao@sergas.es

CONFLICTO DE INTERÉS

**Ayudas para asistencia a congresos y
compensación por docencia y asesoría:**

**Abbott, Abbvie, DiaSorin, Gilead, Hologic,
MSD, Roche y Siemens Healthcare**

Antonio Aguilera

Servicio Microbiología CHUS (Santiago de Compostela)
Departamento de Microbiología USC

La infección causada por el VHE es responsable de algunos casos esporádicos de hepatitis crónica que pueden presenta un alto impacto clínico en poblaciones vulnerables como es el caso de los pacientes trasplantados de órgano sólido (TOS).



Se calcula que cada año hay unos 20 millones de casos de infección por el VHE, de los cuales 3,3 millones presentan los síntomas de la enfermedad (OMS, Julio 2019)

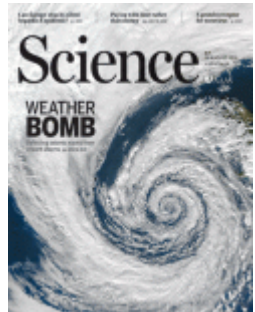
El conocimiento de la infección provocada por el VHE ha cambiado enormemente en los últimos años, hasta incluso llegar a considerarse su condición de enfermedad emergente en los países industrializados de nuestro entorno.

EUROPE'S NEW HEPATITIS PROBLEM

Many get infected with hepatitis E, and a few get very sick. How can the virus be stopped?

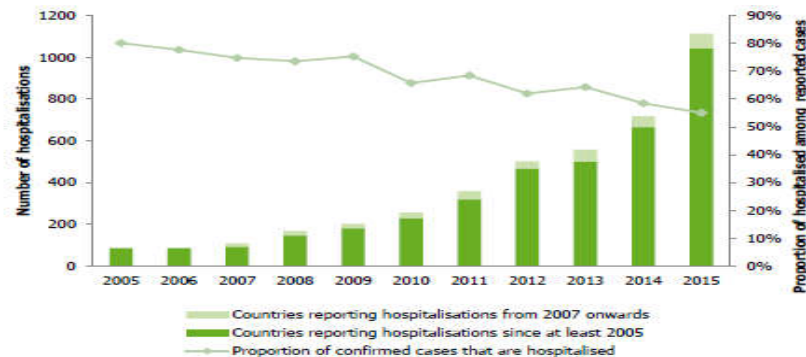
By **Kai Kupferschmidt**

Science 2016; 353: 862-863



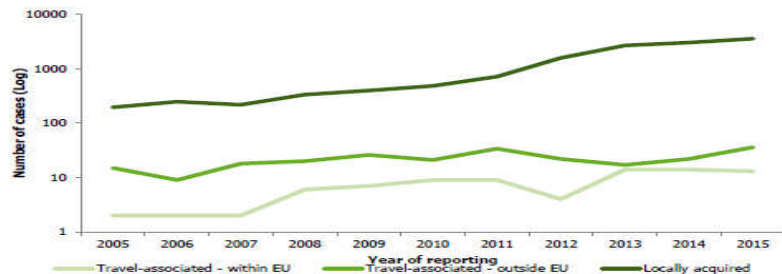
Incremento en los casos diagnosticados de HEPATITIS E en la UE durante los últimos años

Figure 3.5. Number and proportion of hospitalisations among confirmed cases of hepatitis E, EU/EEA Member States, 2005–2015*



* Data available for: Austria, Belgium, Croatia, Czech Republic, Estonia, Germany, Hungary, Italy, Latvia, Poland, Portugal, Slovakia, Slovenia, United Kingdom (Northern Ireland).

Figure 3.7. Confirmed cases of hepatitis E by travel history and year, EU/EEA Member States, 2005–2015*



* Data on travel history available for: Austria, Croatia, Czech Republic, Estonia, France, Hungary, Italy, Latvia, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, United Kingdom (England, Wales, Northern Ireland).



Cifras significativas de prevalencia de viremia por VHE y de seroprevalencia de Anti-VHE-IgG en donantes de sangre de diferentes países de la UE

**TRANSFUSION
MEDICINE**

Official Journal of
the British Blood Transfusion Society

Transfusion Medicine | REVIEW ARTICLE



Hepatitis E: the current state of play

M. J. Ankcorn^{1,2} & R. S. Tedder^{1,2}

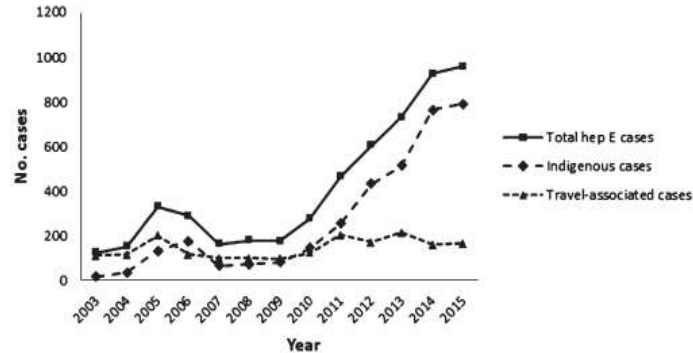


Fig. 1. Reference laboratory-confirmed HEV cases in England & Wales 2003–2015.

Table 2. Prevalence of HEV viraemia in blood donors and IgG seroprevalences in both blood donors and the general population from selected countries where G3 is the dominant genotype. All studies used Wantai IgG assay (Fortress Diagnostics Ltd, Antrim, Northern Ireland, UK). All percentages rounded up to whole numbers

	Country	Blood donors HEV RNA positive	Anti-HEV IgG seroprevalence (blood donors)	Anti-HEV IgG seroprevalence (general population)	Year of sampling
Europe	Austria	1:8416	14%		2013/2014, Fischer <i>et al.</i> (2015)
	England	1:2848			2012/2013, Hewitt <i>et al.</i> (2014)
			12%		2010, Beale <i>et al.</i> (2011)
	France	1:2218	25%		2012/2013, Gallian <i>et al.</i> (2014)
	SW France			34%	2010/2011, Mansuy <i>et al.</i> (2011)
			53%		2003/2004, Mansuy <i>et al.</i> (2011)
	Germany	1:1240			2011, Vollmer <i>et al.</i> (2012)
		1:4525			2011, Baylis <i>et al.</i> (2012)
				30%	2010, Wenzel <i>et al.</i> (2013)
	Netherlands	1:762			2013/2014, Hogema <i>et al.</i> (2016)
North America		1:2671	27%		2011/2012, Slot <i>et al.</i> (2013)
			21%		2011, Hogema <i>et al.</i> (2014)
	Spain	1:3333	20%		2013, Saucedo <i>et al.</i> (2015)
	Sweden	1:7986			2011, Baylis <i>et al.</i> (2012)
	USA	1:9500			2013, Stramer <i>et al.</i> (2016)
			16%		2012, Xu <i>et al.</i> (2013)
		0:1939			2011, Baylis <i>et al.</i> (2012)
		0:5000	6%		2013, Fearon <i>et al.</i> (2014)
	Canada				

La infección por el VHE está “infradiagnosticada”

The Enigma of Hepatitis E Virus

Liza Bronner Murrison, PhD, MPH, and Kenneth E. Sherman, MD, PhD

Table 2. Diagnostic Opportunities and Errors

Clinical Situation	HEV Infection Misdiagnosis
Subclinical infection; patient does not seek care	No diagnosis made
Symptomatic infection; practitioner does not consider HEV infection	Non-HEV diagnosis
Indistinguishable acute HEV infection	Acute hepatitis, cause unknown Chronic liver disease (in a patient with known chronic liver disease) Flare of disease in a patient with chronic autoimmune hepatitis ²⁷ Acute liver injury ²⁶ Liver injury from a drug etiology ²⁸
Chronic HEV infection	Chronic liver disease due to HBV or HCV Chronic liver disease due to HBV/HIV or HCV/HIV coinfection ¹⁸ Autoimmune hepatitis ¹⁸ Idiopathic hepatitis ¹⁸ Acute cryptogenic hepatitis ^{18,21} Acute cellular rejection
HEV-induced neuralgic amyotrophy	Neuralgic amyotrophy ⁷³
HEV-associated Guillain-Barre syndrome	Guillain-Barre syndrome, unknown etiology

HBV, hepatitis B virus; HCV, hepatitis C virus; HEV, hepatitis E virus.

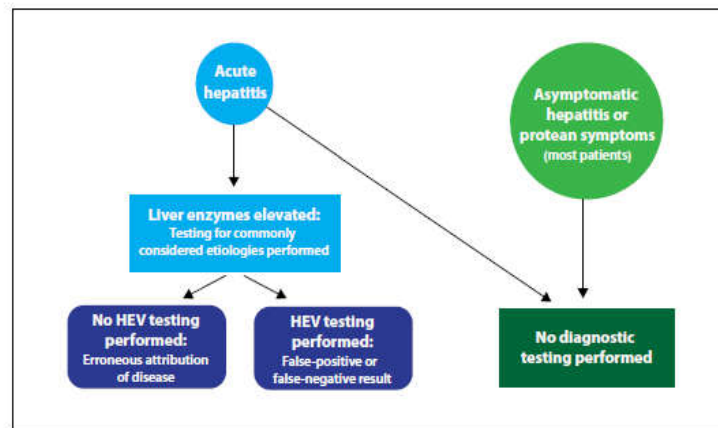


Figure. A flowchart showing the reasons clinicians may fail to diagnose HEV infection.

HEV, hepatitis E virus.

Causas: Presentación clínica frecuentemente asintomática, un diagnóstico diferencial erróneo y un diagnóstico microbiológico difícil y exigente.

The Enigma of Hepatitis E Virus

Liza Bronner Murrison, PhD, MPH, and Kenneth E. Sherman, MD, PhD

Table 2. Diagnostic Opportunities and Errors

Clinical Situation	HEV Infection Misdiagnosis
Subclinical infection; patient does not seek care	No diagnosis made
Symptomatic infection; practitioner does not consider HEV infection	Non-HEV diagnosis
Indistinguishable acute HEV infection	Acute hepatitis, cause unknown Chronic liver disease (in a patient with known chronic liver disease) Flare of disease in a patient with chronic autoimmune hepatitis ²⁷ Acute liver injury ²⁶ Liver injury from a drug etiology ²⁸
Chronic HEV infection	Chronic liver disease due to HBV or HCV Chronic liver disease due to HBV/HIV or HCV/HIV coinfection ¹⁸ Autoimmune hepatitis ¹⁸ Idiopathic hepatitis ¹⁸ Acute cryptogenic hepatitis ^{1,21} Acute cellular rejection
HEV-induced neurologic amyotrophy	Neurologic amyotrophy ⁷³
HEV-associated Guillain-Barre syndrome	Guillain-Barre syndrome, unknown etiology

HBV, hepatitis B virus; HCV, hepatitis C virus; HEV, hepatitis E virus.

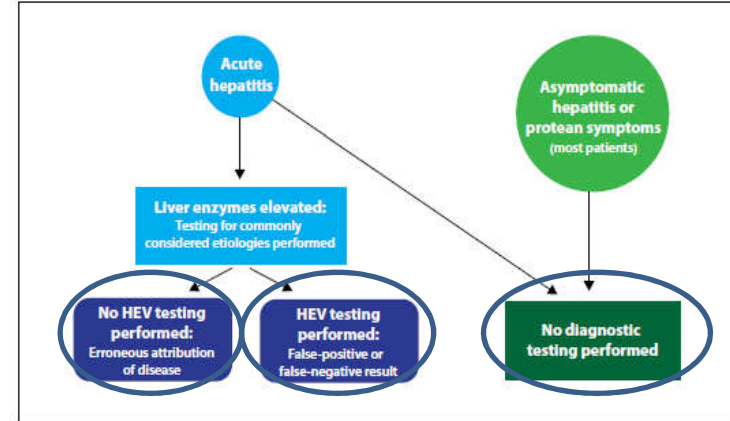


Figure. A flowchart showing the reasons clinicians may fail to diagnose HEV infection.

HEV, hepatitis E virus.

CASO CLÍNICO:

**HEPATITIS E CRÓNICA EN PACIENTE
INMUNODEPRIMIDO TOS**



Primeros casos en España de hepatitis crónica E en trasplantados que han sido tratados

VHE

P-51. HEPATITIS E CRÓNICA EN EL TRASPLANTE DE ÓRGANO SÓLIDO: A PROPÓSITO DE UN CASO

A. Aguilera¹, N. Vallejo², A. Vallejo², A.I. Díaz-Mareque², M. Rodríguez-Velasco², E. Molina² y A. Rivero-Juárez³

¹Complejo Hospitalario Universitario de Santiago, Instituto de Investigación Sanitaria de Santiago, Santiago de Compostela;

²Complejo Hospitalario Universitario de Santiago, Santiago de Compostela; ³Hospital Universitario Reina Sofía, Instituto Maimónides de Investigación Biomédica, Córdoba.

Introducción: La infección crónica por el VHE, definida por la persistencia del ARN viral en suero o heces durante más de 6 meses, se ha descrito en pacientes inmunodeprimidos que habían recibido trasplante de órgano sólido y también en otras poblaciones de inmunodeprimidos, como pacientes oncohematológicos o infectados por el VIH. Los pacientes con hepatitis crónica E suelen estar asintomáticos e infectados principalmente por el genotipo 3.

Caso clínico: Paciente asintomático de 35 años, trasplantado renal desde hace seis, que presenta buen estado general pero con alteración de la bioquímica hepática mixta leve desde hace unos siete meses, siendo las analíticas previas normales y sin incidencias hepatobiliares, ni ictericia ni datos de coagulopatía. Desde el inicio de la alteración bioquímica se suspende la medicación que tomaba por sospecha de hepatitis medicamentosa, aunque no se observan cambios al respecto y continúa la ausencia de síntomas. La ecografía abdominal aporta datos de esteatosis hepática en hígado normofuncionante sin datos de fibrosis relevante y de etiología indeterminada, por lo que se remite a hepatología para valoración. Con los datos aportados por el laboratorio de microbiología se diagnostica de infección por el VHE con presencia de anticuerpos específicos IgG e IgM y ARN-VHE detectable, categorizada como "hepatitis crónica por VHE sin datos de



Paciente asintomática, 35 años.

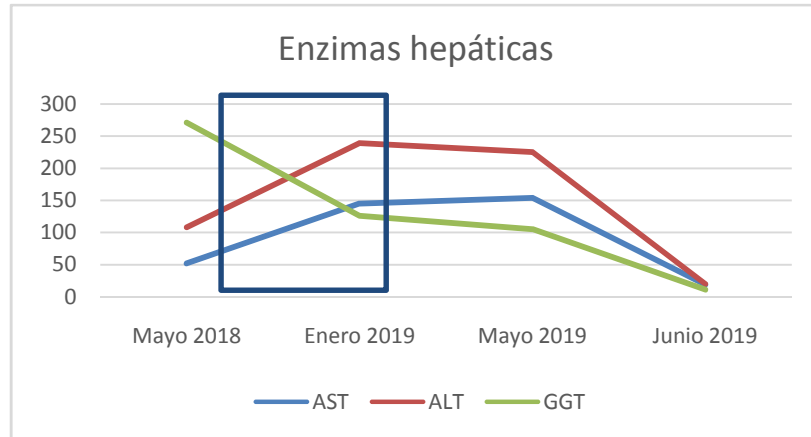
Tx Renal hacía 6 años.

Tratamiento inmunosupresor: (Prednisona, Tacrolimus y Sirolimus)

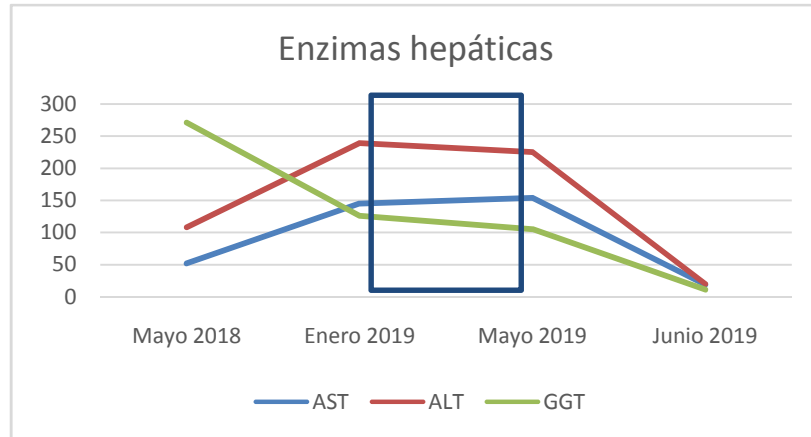
Alteración bioquímica hepática en los últimos siete meses, con resultado previo normal.

Sin incidencias hepatobiliares.

No ictericia, ni coagulopatía



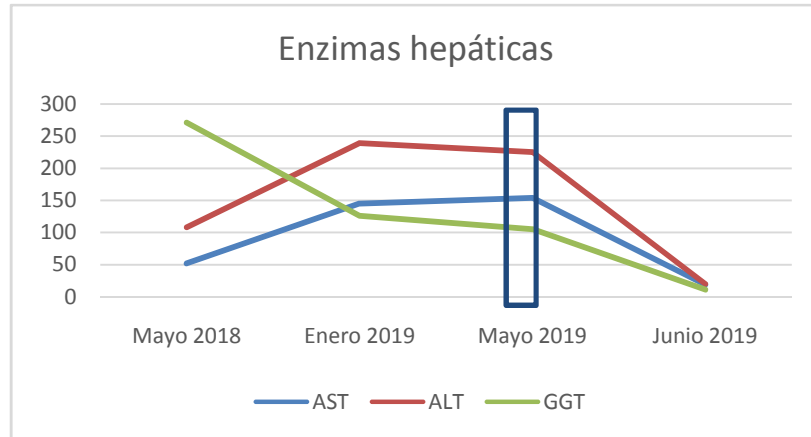
Se suspende medicación (hipolipemiente y anticonceptiva).
Persiste la alteración bioquímica hepática.
Ausencia de infección por VHB y VHC.
En ecografía abdominal datos de esteatosis hepática en hígado normofuncionante sin fibrosis.
Remisión a hepatología para valoración.



Diagnosticada de infección por VHE por la presencia de anticuerpos IgG/IgM y ARN-VHE.

La infección crónica es confirmada al detectar ARN-VHE en una muestra previa de seroteca.

Categorizada como Hepatitis E crónica sin datos de gravedad.

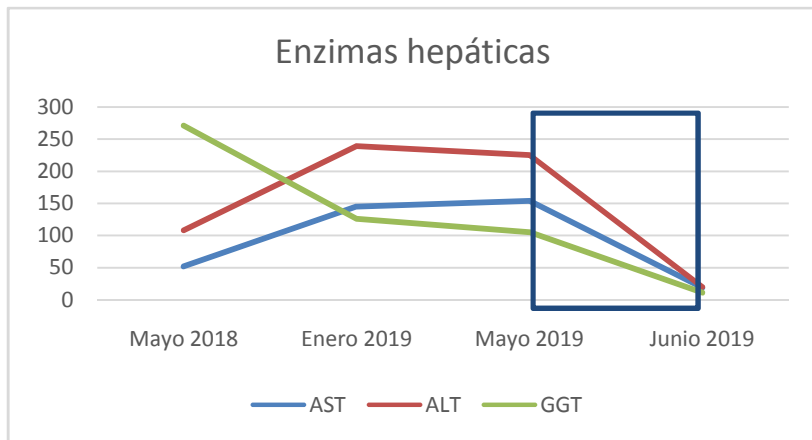


VHE caracterizado como 3f.

Tratamiento antiviral indicado en las GPC (200 mg/8 h) durante 12 s.

Normalización de la bioquímica hepática y ausencia de ARN-VHE en sangre y heces al finalizar el tratamiento.

Se procede al alta y se confirma la RVS a las 24 s.



A 35-year-old female had a kidney transplant in 2013. After transplantation, the patient experienced acute dysfunction of the graft and drug-related leucopenia was solved. From May 2018, the patient received prednisone (5 mg/day), tacrolimus (1.5 mg/day) and sirolimus (1 mg/day) as immunosuppressive therapy. The patient presented with an elevated level of transaminases in May 2018 and was suspected to have a drug-induced liver injury due to paracetamol, hypolipemiant therapy and contraceptive medication. She was negative for HCV antibodies, sHbAg and anti HBc, but positive for anti-HBs (48 mIU/mL). Viral load for HCV and HBV were also undetectable. Nevertheless, after drug interruption or switching, the elevated level of transaminases persisted. In March 2019



microorganisms



Case Report

effects associated with the medication. At the end of therapy, the HEV viral load was negative in the plasma and feces, and the patient continues to have a negative viral load 24 weeks after the completion of therapy.

HEPATITIS E CRÓNICA EN PACIENTES INMUNODEPRIMIDOS TRASPLANTADOS DE ÓRGANO SÓLIDO: REVISIÓN

Viral Hepatitis E and Chronicity: A Growing Public Health Concern

Vikram Thakur^{1*}, Radha Kanta Ratho^{1*}, Swatantra Kumar², Shailendra K. Saxena³, Ishani Bora⁴ and Priyanka Thakur¹

¹Department of Virology, Post Graduate Institute of Medical Education and Research, Chandigarh, India, ²Centre for Advanced Research, Faculty of Medicine, King George's Medical University, Lucknow, India

Review

Clinical Manifestations, Pathogenesis and Treatment of Hepatitis E Virus Infections

Sébastien Lhomme^{1,2,3,*}, Olivier Marion^{2,3,4}, Florence Abravanel^{1,2,3}, Jacques Izopet^{1,2,3} and Nassim Kamar^{2,3,4,*}

Review

Advances in Hepatitis E Virus Biology and Pathogenesis

Shaoli Lin¹ and Yan-Jin Zhang^{1*}

Submit a Manuscript: <https://www.wjgpub.com>

World J Gastroenterol 2020; October 28; 26(42): 6560-6569

DOI: 10.3748/wjg.v26.i37.5543

ISSN 1007-9327 (print) ISSN 2219-2840 (online)

Hepatitis E virus: Epidemiology, diagnosis, clinical manifestations, and treatment

Abdullah Tarik Aslan, Hatice Yasemin Balaban

Seminar

JOURNAL OF CLINICAL AND EXPERIMENTAL HEPATOLOGY

Chronic Hepatitis E Virus Infection and Treatment

Nassim Kamar^{1,2,3,*}, Jacques Izopet^{1,2,3}, Harry R. Dalton¹

¹Department of Nephrology, Dialysis and Organ Transplantation, CHU Rangueil ²INSERM U1043, IFR-BMT, CHU Purpan ³Université Paul Sabatier ⁴Department of Virology, CHU Purpan, Toulouse, France and ⁵Cornwall Gastrointestinal Unit, Royal Cornwall Hospital and European Centre of Environment and Human Health, University of Exeter Medical School, Truro, UK

Submit a Manuscript: <https://www.wjgpub.com>

World J Gastroenterol 2021; March 26; 27(12): 1240-1254

DOI: 10.3748/wjg.v27.i12.1240

ISSN 1007-9327 (print) ISSN 2219-2840 (online)

Hepatitis E in solid organ transplant recipients: A systematic review and meta-analysis

Pansong Hensrivijit, Angkawipa Trongtorsk, Max M Puthengpura, Boonphipon Boonpheng, Charat Thongprayoon, Kann Wijampreecha, Avishek Choudhury, Wisit Kaewput, Shennen A Mao, Michael A Mao, Caroline C Jachowicz, Wisit Cheungpasitporn

Hepatitis E virus infection

Nassim Kamar¹, Jacques Izopet², Nicole Pavio³, Rakesh Aggarwal⁴, Alain Labrique⁵, Heiner Wedemeyer⁶ and Harry R. Dalton^{1*}

NON-COMMISSIONED REVIEW

WILEY

Clinical features and determinants of chronicity in hepatitis E virus infection

Shivakumar Narayanan¹ | Ameer Abutaleb^{1,2} | Kenneth E. Sherman³ | Shyam Kottili¹

REVIEW
published: 26 September 2020
doi: 10.3389/fmicb.2020.577294

Viral Hepatitis E and Chronicity: A Growing Public Health Concern

Vikram Thakur^{1*}, Radha Kanta Ratho^{1*}, Swatantra Kumar², Shailendra K. Saxena³, Ishani Bora⁴ and Priyanka Thakur¹

American Journal of Transplantation 2012; 12: 2261–2267
Wiley Periodicals Inc.

© Copyright 2012 The American Society of Transplantation and the American Society of Transplant Surgeons

Minireview

doi: 10.1111/j.1600-6143.2012.04078.x

Hepatitis E Virus: What Transplant Physicians Should Know

N. Kamar^{a,b,c,*}, F. Legrand-Abravanel^{b,c,d}, J. Izopet^{b,c,d} and L. Rostaing^{a,b,c}

HEV3 and HEV4, have been reported. However, recent data suggest that some areas of the developed world have hyperendemics, for example, the South of France

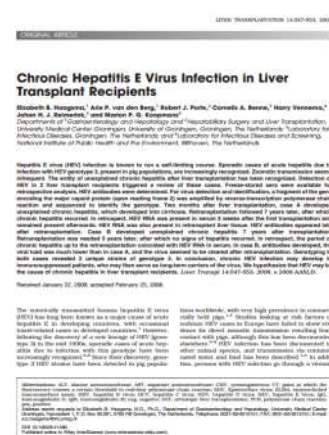
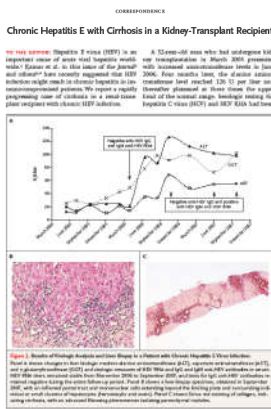
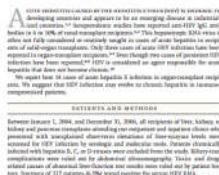
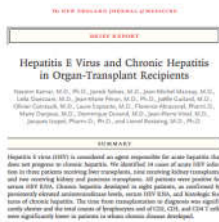
INFECCIÓN CRÓNICA POR VHE EN EL TOS: INTRODUCCIÓN

Los primeros casos de infección crónica por VHE se comunican en el año 2006



European Society for Clinical Virology

3. Banas B, Tausch U, Hofstadter F, et al. Infection with hepatitis E virus: first report of a chronic case and molecular characterization of the virus. *J Clin Virol* 2006;36:Suppl 2:S162. abstract.
4. Kamar N, Peron JM, Ouezzani L, et al. Hepatitis E virus infection can evolve to chronic hepatitis in organ-transplant patients. *J Hepatol* 2007;46:Suppl 1:S70-S71. abstract.



INFECCIÓN CRÓNICA POR VHE EN EL TOS: DEFINICIÓN

En el contexto del trasplante de órganos, se observó que no se producía aclaramiento espontáneo del VHE entre los 3 y 6 meses después de una fase aguda, lo cual propició que se considerase infección crónica cuando la replicación viral persistía por más de 3 meses.

American Journal of Transplantation 2013; 13: 1935–1936
Wiley Periodicals Inc.

© 2013 The American Society of Transplantation and the
American Society of Transplant Surgeons

doi: 10.1002/ajt.12253

Letter to the Editor

How Should Hepatitis E Virus Infection Be Defined in Organ-Transplant Recipients?

In this cases series, no HEV clearance was observed between months 3 and 6 after infection. Hence, chronic HEV infection can be defined as persisting HEV replication beyond 3 months after infection, at least in SOT patients.

N. Kamar^{1,2,3,*}, L. Rostaing^{1,2,3},
F. Legrand-Abravanel^{2,3,4} and J. Izope^{1,2,3,4}

¹Department of Nephrology, Dialysis and Organ Transplantation, CHU Rangueil, Toulouse, France

²Université Paul Sabatier, Toulouse, France

³INSERM U1043, IFR-BMT, CHU Purpan, Toulouse, France

⁴Department of Virology, CHU Purpan, Toulouse, France

* Corresponding author: Nassim Kamar,
kamar.n@chu-toulouse.fr

La infección crónica por VHE se ha descrito en pacientes infectados por genotipos diferentes al 3

Lee GH et al Gastroenterology. 2016 ;150: 355-7

INFECCIÓN CRÓNICA POR VHE EN EL TOS: DIAGNÓSTICO MICROBIOLÓGICO

El diagnóstico microbiológico se basa exclusivamente en la presencia de marcadores de detección directa (ARN-VHE y/o Ag). Las pruebas serológicas que detectan anticuerpos específicos de tipo IgG y/o IgM frente al VHE nunca se pueden usar solas para diagnosticar o excluir la enfermedad crónica.

GASTROENTEROLOGY 2011;140:1481-1489

Factors Associated With Chronic Hepatitis in Patients With Hepatitis E Virus Infection Who Have Received Solid Organ Transplants

NASSIM KAMAR,^{1,2,3} CYRIL GARROUSTE,^{1,3} ELIZABETH B. HAAGSMA,⁴ VALÉRIE GARRIGUE,⁵ SVEN FISCHKE,^{6*} CÉCILE CHAUVET,^{1,3} JÉRÔME DUMORTIER,^{1,6} AMÉLIE CANNESSON,^{1,3} ELISABETH CASSUTO-VIGUIER,^{1,6} ERIC THERVET,^{7*} FILOMENA CONTI,^{8,9} PASCAL LEBRAY,^{1,10} HARRY R. DALTON,^{1,10} ROBERT SANTELLA,^{1,11} NADA KANAAN,^{1,12} MARIE ESSIG,^{1,13} CHRISTIANE MOUSSON,^{1,14} SYLVIE RADENHE,^{1,15} ANNE MARIE ROQUE-AFONSO,^{1,16} JACQUES IZOPET,^{1,17} and LIONEL ROSTAING^{1,18}

Table 2. HEV Serologic and PCR Results at Diagnosis in 85 Solid Organ Transplant Patients With HEV Infection

HEV diagnostic test	No. tested	No. positive	Percent (%)
Anti-HEV IgM ^a	78	32	41.0
Anti-HEV IgG ^a	78	63	80.8
Serum HEV PCR	82 ^b	82	100
HEV genotyping	64	59 ^c	^c

^aA wide range of differing commercial and in-house assays were used, and these differed from center to center.

^bThree patients were not tested for HEV RNA by PCR. The diagnosis of HEV infection in these cases was based on an increased IgM and IgG level.

^cAll 59 patients in whom HEV was genotyped were infected with HEV genotype 3. In 50 of these cases, HEV subtyping was performed and showed infection with the following subtypes: 3f, n = 37; 3c, n = 12; 3e, n = 1. In 5 patients, genotyping was not possible due to failure to amplify HEV.

INFECCIÓN CRÓNICA POR VHE EN EL TOS: DIAGNÓSTICO DIFERENCIAL

Los receptores de TOS con niveles de transaminasas hepáticas por encima del límite superior de la normalidad o con síntomas sugestivos de infección se deben de analizar para detectar VHE.

Toward Systematic Screening for Persistent Hepatitis E Virus Infections in Transplant Patients

Michael J. Ankom, MBBS, MRCP, DTM&H,^{1,2} Samreen Ijaz, PhD,¹ John Poh, PhD,¹ Ahmed M. Elsharkawy, BM, PhD, FRCP,³ Erasmus Smit, FRCPATH,^{4,5} Robert Cramb, MB, FRCPATH,⁶ Swathi Ravi,⁷ Kate Martin, MSc, BSc,⁸ Richard Tedder, MB, BChir, FRCP, FRCPATH,^{1,2,9} and James Neuberger, DM³

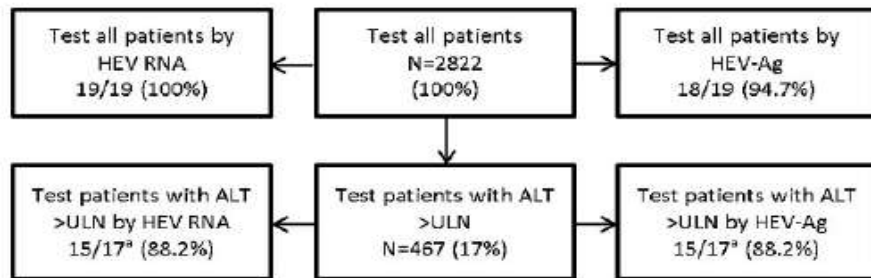


FIGURE 4. Consideration of possible screening strategies for identifying persistent HEV in a transplant cohort. The transplant cohort considered included heart, lung, kidney and stem cell recipients. ^a ALT data missing for two viraemic patients. ULN, Upper limit of normal.

INFECCIÓN CRÓNICA POR VHE EN EL TOS: SEROPREVALENCIA E INCIDENCIA (I)

La incidencia y la seroprevalencia de la infección por el VHE en la población de TOS son difíciles de estimar con precisión, debido a la gran variabilidad dentro de las poblaciones estudiadas con TOS y también a los diferentes ensayos serológicos y moleculares utilizados en estos estudios.

Table 1. Prevalence of hepatitis E virus infection defined by detection of HEV RNA.

Study	Country	Number	Transplanted organs	Prevalence
Legrand-Abravanel et al ⁹	France	700	KT, LT, SPK	3.2%
Legrand-Abravanel ¹⁰	France	171	KT, LT	3.5%
Moal et al ¹⁶	France	1350	KT	1.2%
Pischke et al ¹¹	Germany	226	LT	0.9%
Pischke et al ¹²	Germany	274	HT	1.5%
Haagsma et al ¹³	The Netherlands	285	LT	1.75%
Pas et al ¹⁴	The Netherlands	1200	SOT	1%
Riezebos-Brilman et al ¹⁷	The Netherlands	468	Lung transplantation	2.1%

Abbreviations: KT, kidney-transplant; LT, liver transplant; SPK, simultaneous pancreas-kidney-transplant; HT, heart transplant; SOT, solid-organ transplant.

Table 1 Prevalence and incidence of anti-HEV IgG and HEV RNA in patients with a solid-organ transplant

Study	Number	Organ transplant	Serology tests	Anti-HEV IgG prevalence (%)	HEV RNA prevalence (%)	HEV RNA incidence (%)
Abravanel et al. [72]	700	KT/LT/SPK	Adaltis	12.7	—	3.2
Abravanel et al. [73]	263	KT/LT	Wantai	38.4	—	2.6
Buffaz et al. [74]	206	LT	Wantai	29	—	—
Bini et al. [75]	108	KT/LT	Biokit	2.3	—	—
Haagsma et al. [76]	285	LT	Genelabs	3.5	1.75	—
Koning et al. [77]	145	LT	Wantai	42	0	—
Laverdure et al. [78]	96	LT	Wantai	8.3	—	—
Moal et al. [79]	1350	KT	—	—	1.2	—
Moal et al. [80]	578	KT	Wantai	43	—	1
Magnum et al. [81]	62	Lung T	Mikrogen	13	0	—
Naik et al. [82]	205	KT	Wantai	20.5	0	—
Pas et al. [83]	1200	SOT	Wantai	—	1	—
Pischke et al. [84]	226	LT	Abbot	4.4	0.9	—
Pischke et al. [85]	274	HT	Genelabs	11.3	1.5	—
Pischke et al. [86]	95	Lung T	MP	5.3	3.2	—
Riezebos et al. [87]	468	Lung T	—	—	2.1	—
Sherman et al. [88]	53	KT	Wantai	19.5	0	—
	113	LT		18.9	0	—

HEV hepatitis E virus, KT kidney transplant, LT liver transplant, SPK simultaneous pancreas-kidney transplantation, HT heart transplant, Lung T lung transplant

INFECCIÓN CRÓNICA POR VHE EN EL TOS: SEROPREVALENCIA E INCIDENCIA (II)

El ensayo de Roche para el equipo Cobas 6800 es una poderosa herramienta en términos de robustez, reproducibilidad, sensibilidad (6 UI/mL) en un sistema de PCR RT completamente automatizado, lo que lo convierte en una alternativa viable para un gran volumen de pruebas.

Journal of Clinical Virology 129 (2020) 104525



Contents lists available at [ScienceDirect](#)

Journal of Clinical Virology

journal homepage: www.elsevier.com/locate/jcv



Performance of Roche qualitative HEV assay on the cobas 6800 platform for quantitative measurement of HEV RNA

Viktoria Thodou^{c,*}, Birgit Bremer^a, Olympia E. Anastasiou^b, Markus Cornberg^c, Benjamin Maasoumy^a, Heiner Wedemeyer^d



Thodou V et al . J Clin Virol 2020; 129: 104525



INFECCIÓN CRÓNICA POR VHE EN EL TOS: SEROPREVALENCIA E INCIDENCIA (III)

GEHEP 016 tiene previsto analizar la prevalencia, la incidencia (anual y al final del estudio) y la tasa de cronificación de la infección por VHE en pacientes inmunodeprimidos incluyendo TOS.



SOLICITUD DE PROYECTO DE
INVESTIGACIÓN

PROYECTO
GEHEP 016

1. Datos del proyecto:

Título del proyecto: Hepatitis E en pacientes inmunodeprimidos y trasplantados de órgano sólido: Situación actual de la infección en España

Investigador principal: Antonio Aguilera Guirao

Entidad Solicitante: Complejo Hospitalario Universitario de Santiago.
Instituto de Investigación Sanitaria de Santiago (IDIS)

Responsable de la entidad: Isabel Lista García

Dirección: Travesía A Choupana s/n

Ciudad: Santiago de Compostela

Tfno: 981955308

2. Resumen del proyecto:

Importancia: La infección por el virus de la Hepatitis E (VHE) presenta un peor pronóstico en pacientes inmunodeprimidos, condicionando la aparición de efectos deletéreos asociados a la propia infección y al origen de la inmunosupresión.

Objetivo primario: Evaluar la prevalencia de infección por el VHE en pacientes inmunodeprimidos.

Objetivo secundario: evaluar el desarrollo de infección crónica del VHE en pacientes inmunodeprimidos.

Diseño: Estudio longitudinal prospectivo.

Ámbito: Unidades de Microbiología en colaboración con Enfermedades Infecciosas, Digestivo/Hepatología, Nefrología y Reumatología de los Hospitales participantes en el proyecto.

Pacientes: inmunodeprimidos por infección por el VIH, trasplantados de órgano sólido (hígado y riñón) y pacientes en tratamiento inmunosupresor.

Variable desenlace: infección por el VHE, definida como presencia de ARN viral en sangre periférica.

Variable desenlace secundaria: infección crónica por el VHE, definida como persistencia de ARN viral en sangre periférica durante más de 3 meses.

Intervención: realización de PCR frente al VHE anual en todos los pacientes incluidos en el estudio.

Análisis: se realizará análisis de prevalencia (basal) e incidencia (anual y al final del estudio) de la infección por el VHE en el total de la población y en cada subpoblación de pacientes. Se evaluará la tasa de cronificación de la infección por el VHE en el total de la población y en cada una de las subpoblaciones de pacientes.

INFECCIÓN CRÓNICA POR VHE EN EL TOS: TRANSMISIÓN DEL VHE

En pacientes inmunodeprimidos con TOS, el VHE se transmite a través de los mismos modos que en la población general. Además, en estos pacientes el VHE también puede transmitirse nosocomialmente.

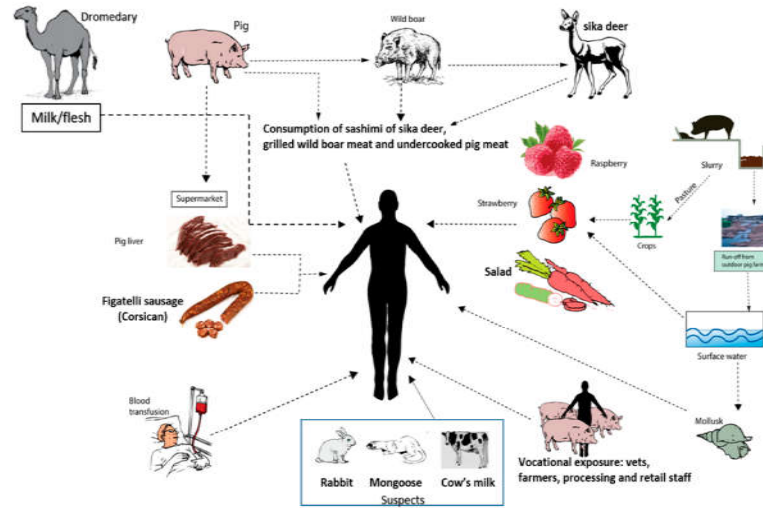
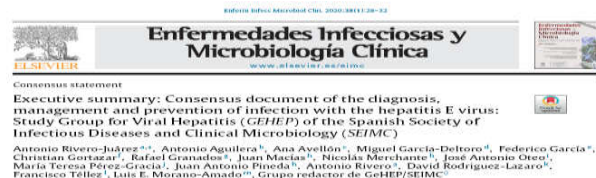


Figure 5. Zoonotic transmission of hepatitis E in developed and many developing countries.

INFECCIÓN CRÓNICA POR VHE EN EL TOS: PREVENCIÓN

Es aconsejable que los pacientes con TOS no coman carne poco cocida, ya que el VHE solo se inactiva con temperaturas superiores a 70º C. Por otra parte, la transmisión nosocomial se evita aislando los casos de infección por VHE que estén ingresados en el hospital.



Recommendations

- The prevention of HEV infection should be based on offering information aimed at avoiding contact with sources of infection (AII).
- On trips to developing countries, to avoid contact with HEV, general hygienic practices should be adopted, such as washing the hands with clean or sanitised water before handling food. Do not drink water or consume ice of unknown purity. The consumption of fruit not peeled by oneself and of raw foods in general should be avoided (AII).
- In addition to adopting the basic hygienic measures recommended for the general population, people at high risk of developing a severe course of infection or the chronification of it (cirrhotic and transplanted) must be specifically informed of the risk involved in eating pork products and undercooked game animals, including sausages, and to avoid the consumption of these products (AII).
- People at high risk of developing a severe course of infection or the chronification of it should subject food to cooking-heating at a temperature $\geq 70^{\circ}\text{C}$ for a minimum of 30 min (AI).

INFECCIÓN CRÓNICA POR VHE EN EL TOS: REINFECCIÓN

Aunque los anticuerpos inducidos por la inmunización activa o pasiva protegen frente a la reinfección, la concentración protectora mínima aun no se ha determinado. Se han informado casos puntuales de reinfección en pacientes TOS, seropositivos para el VHE (<7 UI OMS/mL), alguno de los cuales desarrolló hepatitis crónica.

Hepatitis E Virus Reinfections in Solid-Organ-Transplant Recipients Can Evolve Into Chronic Infections

Florence Abravanel,^{1,2} Sebastien Lhomme,^{1,2} Sabine Chapuy-Regaud,^{1,2} Jean-Michel Mansuy,² Fabrice Muscari,⁴ Federico Sallusto,³ Lionel Rostaing,^{1,3} Nassim Kamar,^{1,3} and Jacques Izopet^{1,2}

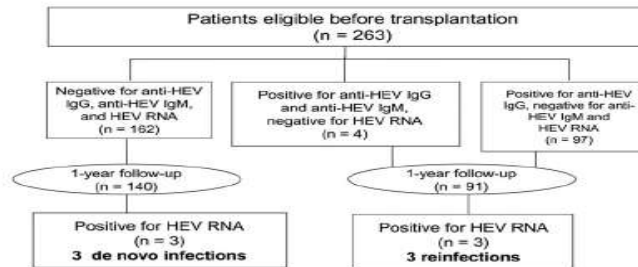


Figure 1. Hepatitis E virus (HEV) markers in 263 recipients of solid-organ transplants. Abbreviations: IgG, immunoglobulin G; IgM, immunoglobulin M.

INFECCIÓN CRÓNICA POR VHE EN EL TOS: HISTORIA NATURAL (I)

Sólo 1/3 de los pacientes con TOS infectados por el VHE presentan síntomas, principalmente fatiga, mientras que los niveles de las enzimas hepáticas aumentan de una manera mucho más moderada que los observados generalmente en pacientes inmunocompetentes.

GASTROENTEROLOGY 2011;140:1481-1489

Factors Associated With Chronic Hepatitis in Patients With Hepatitis E Virus Infection Who Have Received Solid Organ Transplants

NASSIM KAMAR,^{1,2,3} CYRIL GARROUSTE,^{1,2} ELIZABETH B. HAAGSMA,¹ VALERIE GARRIGUE,⁴ SVEN PSCHKE,^{5,6} CÉCILE CHAUVET,^{7,8} JÉRÔME DUMORTIER,^{9,10} AMÉLIE CANNESON,¹¹ ELISABETH CASSUTO-VIGUER,¹² ERIC THERVET,¹³ FILOMENA CONTI,¹⁴ PASCAL LEBRAY,¹⁵ HARRY R. DALTON,^{16,17} ROBERT SANTELLA,^{18,19} NADA KANAAN,²⁰ MARIE ESSIQ,^{21,22} CHRISTIANE MOUSSON,²³ SYLVIE RADENNE,^{24,25} ANNE MARIE ROQUE-ARONSO,^{26,27} JACQUES ZOPRET,^{1,2,3} and LIONEL FOSTAINS^{1,2,3}

Table 4. Patient Characteristics at Diagnosis of HEV Infection

Variables	Resolving group (n = 29)	Chronic group (n = 56)	P value
Time since transplant (mo)	70.3 ± 52.8	41.4 ± 38	.005
Symptoms at presentation (%)	31	32	NS
AST level (IU/L)	107 (16–1571)	94 (21–436)	.02
ALT level (IU/L)	263 (24–2675)	135 (28–874)	.001
γ-glutamyl transpeptidase level (IU/L)	244 (28–2337)	173 (25–3482)	NS
Alanine phosphatase level (IU/L)	251 (66–1924)	172 (46–7775)	NS
Bilirubin level (μmol/L)	16 (6–75)	7 (5–277)	NS
Peak AST level (IU/L)	223 (31–1571)	147 (30–874)	.001
Peak ALT level (IU/L)	272 (29–2675)	167 (32–522)	.005
Serum creatinine level (μmol/L)	168 ± 59	130 ± 51	.005
Hemoglobin level (g/dL)	13.1 ± 1.85	12.9 ± 1.56	NS
White blood cell count (/mm ³)	7253 ± 2834	6122 ± 2370	NS
Lymphocyte count (/mm ³)	1414 ± 684	1399 ± 702	NS
Platelet count (/mm ³)	225,655 ± 62,521	190,384 ± 79,903	.04
Calcineurin inhibitors (%)	75.9	83.9	NS
Cyclosporin A/tacrolimus	9/13	4/43	.003
Cyclosporin A (mg · kg ⁻¹ · day ⁻¹)	1.9 ± 0.5	2.24 ± 1.2	NS
Cyclosporin A trough level (ng/mL)	88 ± 82	183 ± 106	NS
Cyclosporin A C2 level (ng/mL)	54.8 ± 155	35.2 ± 24.8	NS
Tacrolimus (mg · kg ⁻¹ · day ⁻¹)	0.06 ± 0.03	0.09 ± 0.09	NS
Tacrolimus trough level (ng/mL)	8.7 ± 3.2	10.1 ± 4.3	NS
Belatacept (%)	3.4	0	NS
mTOR inhibitors (%)	24	19.6	NS
Sirolimus trough level (ng/mL)	7.8 ± 4.3	8.7 ± 3.6	NS
Everolimus trough level (ng/mL)	10.5 ± 7.07	12.1 ± 6.3	NS
Mycophenolic acid (%)	79.3	69.6	NS
Mycophenolic dose (mg · kg ⁻¹ · day ⁻¹)	19.2 ± 7.6	20.1 ± 8.07	NS
Azathioprine (%)	0	7.1	NS
Corticosteroids (%)	72.4	69.6	NS
Corticosteroid dose (mg · kg ⁻¹ · day ⁻¹)	0.08 ± 0.04	0.1 ± 0.09	NS
Anti-HEV IgG P/N ^a (%)	32.1	46	NS
Anti-HEV IgM P/N ^a (%)	84.6	78.8	NS
HEV RNA concentration (copies/mL) ^b	1,927,500 (500–71,440,000)	1,248,500 (35,600–71,000,000)	NS

C2, concentration 2 hours after intake; mTOR, mammalian target of rapamycin; N, negative; P, positive.

^aAnti-HEV IgG and IgM were studied in, respectively, 28 and 26 patients from the resolving group and 50 and 52 patients from the chronic group.

^bData were available for 18 patients from the resolving group and 26 patients from the chronic group.

INFECCIÓN CRÓNICA POR VHE EN EL TOS: HISTORIA NATURAL (II)

Aproximadamente $\frac{1}{3}$ de los pacientes infectados por el VHE y con TOS eliminan espontáneamente el virus sin reactivación en los primeros 3 meses posteriores al diagnóstico, mientras que los $\frac{2}{3}$ restantes desarrollaron hepatitis crónica E.

GASTROENTEROLOGY 2011;140:1481–1489

Factors Associated With Chronic Hepatitis in Patients With Hepatitis E Virus Infection Who Have Received Solid Organ Transplants

NASSIM KAMAR,^{*,†,§} CYRIL GARROUSTE,^{*,‡} ELIZABETH B. HAAGSMA,[¶] VALÉRIE GARRIGUE,^{*} SVEN PISCHKE,^{**} CÉCILE CHAUVET,^{**} JÉRÔME DUMORTIER,^{§§} AMÉLIE CANNESON,^{||} ELISABETH CASSUTO-VIGUIER,^{¶¶} ERIC THERVET,^{**} FILOMENA CONTI,^{***} PASCAL LEBRAY,^{***} HARRY R. DALTON,^{§§§} ROBERT SANTELLA,^{|||} NADA KANAAN,^{¶¶¶} MARIE ESSIG,^{***} CHRISTIANE MOUSSON,^{****} SYLVIE RADENNE,^{††††} ANNE MARIE ROQUE-AFONSO,^{§§§§} JACQUES IZOPET,^{†,§,‡} and LIONEL ROSTAING^{*,†,§}

In conclusion, this is the largest series to assess the occurrence of chronic HEV infection after solid organ transplant. Approximately 60% of solid organ transplant patients infected with HEV developed chronic hepatitis. The use of tacrolimus rather than cyclosporin A and low platelet count were the main independent factors associated with chronic HEV infection.

Review

Clinical Manifestations, Pathogenesis and Treatment of Hepatitis E Virus Infections

Sébastien Lhomme^{1,2,3,*}, Olivier Marion^{2,3,4}, Florence Abravanel^{1,2,3}, Jacques Izopet^{1,2,3} and Nassim Kamar^{2,3,4,*}

7. Pathogenesis of Chronic Infection in Immunocompromised Patients

Most studies on the pathogenesis of chronic HEV installation have focused on SOT recipients. The incidence of HEV infection in these patients varies from 0.9% to 3.5%, based on detecting HEV RNA, and acute infections become chronic in ~60% of them [48]. Other studies that were interested in the seroconversion rate among transplant recipients have reported rates of progression to chronicity ranging from 21% to 50% [156–158].

INFECCIÓN CRÓNICA POR VHE EN EL TOS: HISTORIA NATURAL (III)

En torno al 10% de los pacientes con TOS e infección crónica por el VHE presentan en mayor o menor medida una rápida evolución de la fibrosis hepática a formas más graves como cirrosis y cirrosis descompensada. No se han informado hasta el momento casos de hepatitis fulminante.

Review

Clinical Manifestations, Pathogenesis and Treatment of Hepatitis E Virus Infections

Sébastien Lhomme^{1,2,3,*}, Olivier Marion^{2,3,4}, Florence Abravanel^{1,2,3}, Jacques Izopet^{1,2,3}
and Nassim Kamar^{2,3,4,*}

Nearly 10% of SOT patients with HEV develop cirrhosis within 3 to 5 years after the primary infection (Figure 5). Progression to liver fibrosis seems to be associated with the slow diversification of the P domain of the capsid [160]. More aggressive variants may be selected in fibroses, although this needs confirmation in a larger cohort.

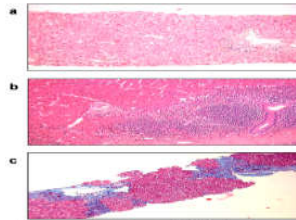


Figure 5. Histology of liver biopsies from a chronically HEV-infected patient. (a) Initial liver biopsy; (b) inflammation after 15 months of infection; and (c) Cirrhosis after 38 months of infection (Masson's trichrome, magnification 100x).

INFECCIÓN CRÓNICA POR VHE EN EL TOS: FACTORES DE RIESGO (I)

No existen muchos estudios que hayan evaluado los factores de riesgo de la infección crónica por el VHE en el TOS y los mecanismos implicados en la persistencia del VHE no se conocen con exactitud.

Received: 25 May 2018 | Accepted: 25 October 2018
DOI: 10.1111/jvh.13059

NON-COMMISSIONED REVIEW

WILEY



Clinical features and determinants of chronicity in hepatitis E virus infection

Shivakumar Narayanan¹ | Ameer Abutaleb^{1,2} | Kenneth E. Sherman³ | Shyam Kottili¹ 

Narayanan et al. J Viral Hep 2019; 4:414-21

GASTROENTEROLOGY 2011;140:1481-1489

Factors Associated With Chronic Hepatitis in Patients With Hepatitis E Virus Infection Who Have Received Solid Organ Transplants

NASSIM KAMAR,^{*,†,§} CYRIL GARROUSTE,^{*,†} ELIZABETH B. HAAGSMA,[†] VALÉRIE GARRIGUE,^{*} SVEN PISCHE,^{**} CÉCILE CHAUVET,^{††} JÉRÔME DUMORTIER,^{§§} AMÉLIE CANNESSE,^{††} ELISABETH CASSUTO-VIGUIER,^{†††} ERIC THERVET,^{**} FILOMENA CONTI,^{***} PASCAL LEBRAY,^{†††} HARRY R. DALTON,^{§§§} ROBERT SANTELLA,^{||||} NADA KANAAN,^{†††} MARIE ESSIG,^{***} CHRISTIANE MOUSSON,^{****} SYLVIE RADENNE,^{†††} ANNE MARIE ROQUE-AFONSO,^{§§§§} JACQUES IZOPET,^{†,§,||} and LIONEL ROSTAING^{*,†,§}

INFECCIÓN CRÓNICA POR VHE EN EL TOS: FACTORES DE RIESGO (II)

Factores propuestos con mayor o menor evidencia:

Factores del huésped:

Alteración de la respuesta inmune del huésped innata y adaptativa.

Factores del virus:

Mayor diversidad de cuasiespecies del VHE en las regiones ORF1 y ORF2 durante la fase aguda.

El genotipo del VHE y las diferencias epidemiológicas entre las infecciones por diferentes genotipos.

Otros factores:

Uso de Tacrolimus y recuento bajo de plaquetas.

GASTROENTEROLOGY 2011;140:1481-1489

Factors Associated With Chronic Hepatitis in Patients With Hepatitis E Virus Infection Who Have Received Solid Organ Transplants

NASSIM KAMAR,^{1,2,3,*} CYRIL GARRIGUET,^{1,2} ELIZABETH B. HAAGSMA,¹ VALÉRIE GARRIGUE,¹ SVEN PSCHKE,^{1,2} CÉCILE CHAUVEY,^{1,2} JÉRÔME DUMORTIER,^{1,2} AMÉLIE CARNESSON,^{1,2} ELISABETH CASSUTO-VIGIER,^{1,2} ERIC THIÉRY,^{1,2} FLORENTA CONTI,^{1,2} PASCAL LEBRAY,^{1,2} HARRY P. DALTON,^{1,2,3} ROBERT SANTELLA,^{1,2,3} NADA KANAAN,^{1,2,3} MARIE ESSIG,^{1,2,3} CHRISTIANE MOUSSON,^{1,2,3} SYLVIE RADENNE,^{1,2,3} ANNE MARIE ROQUE-ARONSON,^{1,2,3} JACQUES IZOPET,^{1,2,3} and LIONEL ROSTANS^{1,2,3}

Review

Clinical Manifestations, Pathogenesis and Treatment of Hepatitis E Virus Infections

Sébastien Lhomme^{1,2,3,*}, Olivier Marion^{2,3,4}, Florence Abravanel^{1,2,3}, Jacques Izopet^{1,2,3} and Nassim Kamar^{2,3,4,*}

Received: 25 May 2018 | Accepted: 25 October 2018
DOI: 10.1111/jvh.13059

NON-COMMISSIONED REVIEW

WILEY

Clinical features and determinants of chronicity in hepatitis E virus infection

Shivakumar Narayanan¹ | Ameer Abutaleb^{1,2} | Kenneth E. Sherman³ | Shyam Kottihalli¹

INFECCIÓN CRÓNICA POR VHE EN EL TOS: TRATAMIENTO (I)

Aunque la reducción de la terapia inmunosupresora, especialmente la dirigida a las células T, puede lograr la eliminación del VHE en casi un tercio de los pacientes, el tratamiento antiviral es necesario en quienes no lo consiguen.

Las indicaciones terapéuticas recogidas en las GPC son eficaces en el tratamiento de la infección crónica por VHE; sí bien una de ellas está contraindicada en receptores de trasplante de riñón, páncreas, corazón y pulmón al aumentar el riesgo de rechazo.



viruses



Review

Treatment of HEV Infection in Patients with a Solid-Organ Transplant and Chronic Hepatitis

Nassim Kamar ^{1,2,3,*}, Sébastien Lhomme ^{2,3,4}, Florence Abravanel ^{2,3,4}, Olivier Marion ^{1,2}, Jean-Marie Peron ^{3,5}, Laurent Alric ^{3,6,7} and Jacques Izopet ^{2,3,4}

INFECCIÓN CRÓNICA POR VHE EN EL TOS: TRATAMIENTO (II)

La monoterapia con el antiviral indicado prioritariamente en las diferentes GPC, en ciclos de 12 semanas (la duración óptima se desconoce) y con dosis ajustada a peso (media de 600 mg/día) es altamente eficiente (RVS del 78% a un ciclo y 90% a dos) en el tratamiento de la infección crónica por VHE en receptores de TOS.

Clinical Infectious Diseases

MAJOR ARTICLE



Kamar N et al. Clin Infect Dis 2020; 71:1204-11.

INFECCIÓN CRÓNICA POR VHE EN EL TOS: TRATAMIENTO (III)

Las diferentes GPC contemplan opciones de tratamiento y algoritmos similares



Review

Treatment of HEV Infection in Patients with a Solid-Organ Transplant and Chronic Hepatitis

Nassim Kamar^{1,2,3,*}, Sébastien Lhomme^{2,3,4}, Florence Abravanel^{2,3,4}, Olivier Marion^{1,2}, Jean-Marie Peron^{3,5}, Laurent Alric^{3,6,7} and Jacques Izopet^{2,3,4}

Kamar N et al. Viruses 2016; 8,222.

Review



Summary of the British Transplantation Society UK Guidelines for Hepatitis E and Solid Organ Transplantation

Stuart McPherson, MB ChB, MD, FRCP¹, Ahmed M. Elsharkawy, BM, PhD, FRCP², Michael Aronson, MBBS, MRCP³, Samreen Ijaz, PhD⁴, James Powell, MB ChB, MD, FRCS⁴, Ian Rowe, MRCSB, MRCP, PhD⁵, Richard Tisdall, MB BCh, FRCP, FRCR⁶, and Peter A. Andrews, MD, FRCP⁸

Abstract: The incidence and prevalence of hepatitis E virus (HEV) infection has increased in many developed countries over the last decade, predominantly due to infection with genotype 3 (G3) HEV. Infection with HEV G3 is important in transplant recipients because it can persist in immunosuppressed individuals, leading, if untreated, to the development of chronic hepatitis and significant liver fibrosis. The British Transplantation Society (BTS) has developed Guidelines for "Hepatitis E and Solid Organ Transplantation" to inform clinical teams and patients about hepatitis E, to help increase the recognition of persistent hepatitis E infection, and to provide clear guidance on its management. This guideline was published on the BTS website in June 2017 and aims to review the evidence relating to the diagnosis and management of persistent hepatitis E in solid organ transplant recipients and the methods of prevention of HEV infection. In line with previous guidelines published by the BTS, the guideline has used the Grading of Recommendations, Assessment, Development and Evaluations (GRADE) system to rate the strength of evidence and recommendations. This article includes a summary overview of hepatitis E and transplantation with key references, and the statements of recommendation contained within the guideline. It is recommended that the full guideline document is consulted for complete details of the relevant references and evidence base. This may be accessed at <https://bts.org.uk/guidelines-standards/>.

(Transplantation 2018;102: 15–20)

The incidence and prevalence of hepatitis E virus (HEV) infection has increased in many developed countries over the last decade, predominantly due to infection with genotype 3 (G3) HEV. Infection with HEV G3 is important in transplant recipients because it can persist in immunosuppressed individuals, leading, if untreated, to the development of chronic hepatitis and significant liver fibrosis. Because there are currently no international guidelines on the management of hepatitis E in transplant recipients, the British Transplantation Society (BTS) has developed guidelines to inform clinical teams and patients about hepatitis E to help

increase the recognition of persistent hepatitis E infection and to provide clear guidance on its management. The following includes an overview of hepatitis E and transplantation with key references, and the statements of recommendations contained within the BTS guideline.

OVERVIEW OF HEPATITIS E AND SOLID ORGAN TRANSPLANTATION

Epidemiology of HEV
HEV belongs to the genus *Hepatitis* in the *Hepadnaviridae* family and infects humans and a range of animal hosts.¹

Four major HEV genotypes infect humans (G1 to G4). The

The authors received no support for the writing of either the BTS guideline or the paper based upon it.

¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

²⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

²¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

²² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

²³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

²⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

²⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

²⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

²⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

²⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

²⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

³⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

³¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

³² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

³³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

³⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

³⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

³⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

³⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

³⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

³⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁴⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁴¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁴² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁴³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁴⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁴⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁴⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁴⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁴⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁴⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁵⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁵¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁵² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁵³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁵⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁵⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁵⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁵⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁵⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁵⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁶⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁶¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁶² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁶³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁶⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁶⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁶⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁶⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁶⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁶⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁷⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁷¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁷² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁷³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁷⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁷⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁷⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁷⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁷⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁷⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁸⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁸¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁸² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁸³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁸⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁸⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁸⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁸⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁸⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁸⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁹⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁹¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁹² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁹³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁹⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁹⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁹⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁹⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁹⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

⁹⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁰⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁰¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁰² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁰³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁰⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁰⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁰⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁰⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁰⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁰⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹¹⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹¹¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹¹² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹¹³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹¹⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹¹⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹¹⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹¹⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹¹⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹¹⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹²⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹²¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹²² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹²³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹²⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹²⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹²⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹²⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹²⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹²⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹³⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹³¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹³² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹³³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹³⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹³⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹³⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹³⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹³⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹³⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁴⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁴¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁴² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁴³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁴⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁴⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁴⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁴⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁴⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁴⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁵⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁵¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁵² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁵³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁵⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁵⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁵⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁵⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁵⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁵⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁶⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁶¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁶² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁶³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁶⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁶⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁶⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁶⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁶⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁶⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁷⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁷¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁷² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁷³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁷⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁷⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁷⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁷⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁷⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁷⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁸⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁸¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁸² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁸³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁸⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁸⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁸⁶ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁸⁷ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁸⁸ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁸⁹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁹⁰ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁹¹ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁹² Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁹³ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁹⁴ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

¹⁹⁵ Liver Transplant Unit, Queen Elizabeth Hospital, Birmingham, United Kingdom

<

INFECCIÓN CRÓNICA POR VHE EN EL TOS: TRATAMIENTO (IV)

Consideraciones al tratamiento antiviral indicado prioritariamente en las GPC:

Predictores de respuesta: Existen discrepancias en el valor predictivo del aclaramiento viral al mes de iniciar el tratamiento; sin embargo si que consideran como tales el bajo recuento de linfocitos al inicio del tratamiento, la necesidad de reducción de la dosis y el requerimiento de transfusión por la mala tolerancia hematológica.

Rango terapéutico: Para el antiviral indicado prioritariamente en las GPC, las concentraciones plasmáticas en el estado estacionario son significativamente más altas en los respondedores clínicos (1,96 vs 0,48 mg/L)

Mutaciones: Las mutaciones de polimerasa viral (Y1320H, K1383N, D1384G, K1398R, V1479I, G1634R) previas al tratamiento y/o de novo con esta indicación, no tienen impacto negativo en la eliminación del VHE .

Retrasplante: En pacientes TOS con infección crónica por VHE y disfunción del aloinjerto es apropiado el tratamiento antes de considerar el retrasplante para evitar recurrencias.

Rescate: No hay opciones alternativas, que puedan recomendarse, al tratamiento antiviral indicado prioritariamente en las diferentes GPC, excepto para el escenario específico de trasplante de hígado.

Olivier-Hourmand et al. BMC Infectious Diseases
<https://doi.org/10.1186/s12879-020-05212-2>

(2020) 20:522

BMC Infectious Diseases

CASE REPORT

Open Access

Olivier-Hourmand I et al. BMC Infect Dis. 2020;20(1):522..

Clinical Infectious Diseases

MAJOR ARTICLE



viruses

Review
Treatment of HEV Infection in Patients with
a Solid-Organ Transplant and Chronic Hepatitis

Nassim Kamar ^{1,2,3,4}, Sébastien Lhomme ^{2,3,4}, Florence Abeyanet ^{2,3,4}, Olivier Marion ^{1,2},
Jean-Marie Perron ^{2,3}, Laurent Alric ^{2,3,7} and Jacques Izopet ^{2,3,4}

MDPI

INFECCIÓN CRÓNICA POR VHE EN EL TOS: NOVEDADES Y DILEMAS

Diferentes estudios han encontrado que durante el tratamiento de la infección crónica por VHE, la persistencia viral en el eyaculado superó en más de nueve meses la duración de la viremia

Research Article
Viral Hepatitis

JOURNAL
OF HEPATOLOGY

Hepatitis E virus persists in the ejaculate of chronically infected men

Thomas Horvatis^{1,2,*}, Jan-Erik Wißmann³, Reimar Johné⁴, Martin H. Groschup^{2,5},
Ashish K. Gadicherla⁴, Julian Schulze zur Wiesch^{1,2}, Martin Eiden^{2,5}, Daniel Todt^{3,6},
Rudolph Reimer⁷, Lisa Dähnert^{2,5}, Anja Schöbel⁸, Karoline Horvatis¹, Rabea Lübke¹,
Christine Wolschke⁹, Francis Ayuk⁹, Meike Rybczynski¹⁰, Ansgar W. Lohse^{1,2},
Marylyn M. Addo^{1,2}, Eva Herker⁸, Marc Lütgehetmann^{2,11,†}, Eike Steinmann^{2,3,†},
Sven Pischke^{1,2,†}

Horvatis T et al. J Hepatol 2021; S0168-8278(21)00025-8..

Los pacientes con infección crónica por VHE albergan variantes virales recombinantes del huésped, que incluyen fragmentos de genes humanos de origen variable.

Review

Clinical Manifestations, Pathogenesis and Treatment of Hepatitis E Virus Infections

Sébastien Lhomme^{1,2,3,*}, Olivier Marion^{2,3,4}, Florence Abravanel^{1,2,3}, Jacques Izopet^{1,2,3}
and Nassim Kamar^{2,3,4,*}

Lhomme S et al. J Clin Med 2020; 9, 331

INFECCIÓN CRÓNICA POR VHE EN EL TOS: EPÍLOGO

DISCUSIÓN Y CONCLUSIONES

Las diferentes guías de práctica clínica (GPC) para el manejo de la hepatitis E (BTS, EASL y GEHEP) recomiendan el cribado del VHE en trasplantados receptores de órgano sólido y pacientes inmunodeprimidos con los niveles de transaminasas por encima del límite normal, además de en todos los casos de hepatitis medicamentosa y de origen incierto. Sin embargo, estas recomendaciones no se están llevando a la práctica como lo demuestra el caso presentado en un receptor de trasplante renal. Se hace por tanto necesario recomendar explícitamente el cribado periódico del VHE en todos los pacientes trasplantados de órgano sólido con alteraciones de la bioquímica hepática con independencia del tipo de órgano trasplantado.

NOS WEBMOS EN GRANADA



Gracias por su atención

Antonio Aguilera

Servicio Microbiología CHUS (Santiago de Compostela)

Departamento de Microbiología USC

antonio.aguilera.@usc.es

