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Investigating risk factors and transmission of acute Hepatitis C: The UK Acute Hepatitis C cohort

Submission date
01/03/2021

Recruitment status
No longer recruiting

Registration date
05/05/2021

Overall study status
Ongoing

Last Edited
13/12/2024

Condition category
Infections and Infestations

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims
Hepatitis C (HCV) is a viral infection transmitted by exposure to infected body fluids. Whilst some people can be exposed to the virus and clear it themselves, the majority of people will develop a long-lasting infection unless they are treated. In some cases, people might not realise they are infected and not have any specific symptoms, but unknowingly transmit the virus to other people. In other cases, HCV can cause cirrhosis of the liver and liver cancer. HCV is a global problem and is a major cause of illness worldwide. Overall, we think that HCV is responsible for roughly 600,000 deaths every year.

Until recently, HCV was very difficult to treat. Earlier treatments were only partly effective and had many side effects. New drug-classes have recently become available and have dramatically changed HCV treatment. These are called directly-acting-antivirals (DAAs). In most cases, these drugs can cure ~95% of infected people. The success of DAAs has led to hope that HCV can be eliminated as a major health problem worldwide.

In this study, we're aiming to study recently acquired HCV infections (acute infections). This means people who have been infected (or re-infected) at some point within the past twelve months. Diagnosing new or acute infections can be very hard. We still don't fully understand how these infections can spread between groups of people – so-called transmission networks.

The main aim of this study is to better understand the ways in which the virus can spread between groups of people. We aim to do this by better understanding the people who are infected, how they were infected and by looking at the virus itself. We hope that this information will help us to design tools to reduce the spread of the infection.

Who can participate?
Adults (aged 18 years or over) with acute hepatitis C (HCV) infection

What does the study involve?
Firstly, participants to complete a questionnaire that aims to understand what factors may have

put them at risk for HCV infection and transmission.
Secondly, a blood sample is taken. This sample would be collected in addition to tests that we would routinely recommend for standard clinical care – extra tubes but no extra needles. We would collect this at the first visit and at any subsequent visits participants show any evidence of having been re-infected with HCV. Participants can take part in the study by answering the questionnaire only, without having a blood sample collected. There are a total of four visits over three years.

What are the possible benefits and risks of participating?
There is no direct benefit for participants from taking part in the study, beyond receiving general information about their health. We hope that the knowledge gained from this study will contribute towards efforts to eliminate HCV as a global health problem
This study involves some blood tests. Taking blood samples may sometimes result in slight pain or bruising to the area, and occasionally people can feel faint. Our trained team will be on hand to help in the unlikely event that any problems arise.

Where is the study run from?
1. Imperial College NHS Trust (UK)
2. Guy's & St Thomas' NHS Foundation Trust (UK)

When is the study starting and how long is it expected to run for?
August 2020 to November 2023

Who is funding the study?
National Institute for Health Research (NIHR) (UK)

Who is the main contact?
Dr Malick Gibani, m.gibani@nhs.net

Contact information

Type(s)
Public

Contact name
Dr Malick Gibani

ORCID ID
http://orcid.org/0000-0003-1781-0053

Contact details
Wright-Flemming Institute
Medical School
St Mary's Hospital
London
United Kingdom
W2 1NY
+44 (0)7866 914157
m.gibani@nhs.net

Additional identifiers

EudraCT/CTIS number
Nil known

IRAS number
270137

ClinicalTrials.gov number
Nil known

Secondary identifying numbers
19SM5527, IRAS 270137

Study information

Scientific Title
UK Cohort for Acute Hepatitis C: A prospective, multicentre, observational, cohort study of Acute Hepatitis C in the United Kingdom

Acronym
UKACH

Study objectives
To identify and describe cases of acute HCV infection in the United Kingdom

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 06/02/2020, London - Westminster Research Ethics Committee (The Old Chapel, Royal Standard Place, Nottingham, NG1 6FS, UK; +44 (0)207 104 8237; westminster.rec@hra.nhs.uk), ref: 19/LO/1859

Study design
Prospective observational multi-centre cohort study

Primary study design
Observational

Secondary study design
Cohort study

Study setting(s)
Hospital

Study type(s)
Other

Participant information sheet
See additional file ISRCTN10510711_PIS_V2.0_08Dec2020 (added 01/06/2021)

Health condition(s) or problem(s) studied
Hepatitis C

Interventions
There are two main components to this study. The first is a questionnaire. We ask participants to complete a questionnaire that aims to understand what factors may have put them at risk for HCV infection and transmission. This will involve a series of questions on their personal activities, including those such as drug use, sexual practices and medical procedures. We would ask participants complete a questionnaire each year for the duration of the study (four questionnaires in total), if they of the study visits. The second component of the study is to collect a blood sample. We would use this sample to study the genetic sequence of the HCV virus in detail This will tell us what sub-type or 'family' of virus they are infected with (the genotype) as well as how it is related to other circulating viruses (the phylogeny). We can use the genetic information of the virus to anonymously compare it to other HCV sequences, to explore potential transmission patterns. It may also give us additional information, such as how well different drugs are likely to work.

We would aim to collect about 20ml of blood (equivalent to ~4 small teaspoons). This sample would be collected in addition to tests that we would routinely recommend for standard clinical care – extra tubes but no extra needles. We would collect this at the first visit and at any subsequent visits when participants show any evidence of having been re-infected with HCV. Participants can take part in the study by answering the questionnaire only, without having a blood sample collected. There are a total of four visits over three years.

Intervention Type
Other

Primary outcome measure
Descriptive statistics (n[%]) of participant characteristics (demographics and risk factors) measured using a bespoke questionnaire and review of medical notes and virus characteristics (genotype) at baseline and during follow up as measured by routine Sanger sequencing and Whole Genome Sequencing

Secondary outcome measures
1. Descriptive statistics of risk factors collectively and by individual acquisition risk sub-groups, including but not limited to MSM, PWID, primary infection and re-infection. Analysis will be performed at baseline and at timepoints 12, 24 and 36 months of follow-up, using a bespoke questionnaire and review of medical notes
2. Proportion on patients with acute infection with an undetectable viral load at 3 years post enrolment by; SVR at 12 weeks post completion of DAA treatment; SVR at 24 weeks post completion of DAA treatment by review of medical notes
3. Descriptive statistics of treatment regimens and source (NHSE, clinical trial, self-sourced via internet). Analysis will be performed overall and by acquisition risk sub-group (including but not limited to MSM, PWID, primary infection and re-infection), by review of medical notes and a bespoke questionnaire
4. Descriptive network analysis including clustering and geographic analysis based upon epidemiological data by combing geographic data from questionnaire and whole genome sequence data

5. Proportion of individuals meeting criteria for re-infection at month 12, 24 and 36 of follow up, collectively and by individual subgroup, using a bespoke questionnaire and review of medical notes
6. Proportion of cases under ongoing secondary care follow up defined as attending annual follow up visits in secondary care; Proportion of cases discharged from routine follow up owing to successful treatment; Proportion lost to follow up. Data summarised at timepoints 12, 24 and 36 months of follow-up, using a bespoke questionnaire and review of medical notes
7. Phylogenetic analysis of HCV using whole genome sequencing of HCV isolates presented as maximum likelihood phylogenetic trees; Clustering analysis; Time to most recent common ancestor

Overall study start date
01/08/2020

Completion date
01/11/2025

Eligibility

Key inclusion criteria
1. Adults (aged >=18 years) with acute hepatitis C (HCV) infection
2. Evidence of acute hepatits C infection or re-infection defined:
I. A positive HCV RNA test in the presence of a negative anti-HCV test (antibody and/or antigen and/or HCV RNA) within the past 12 months
II. A positive HCV RNA test with an acute clincial hepatitis (jaundice or ALT rise >5x ULN) and no other identifiable cause;
III. A positive HCV RNA test in patients who had previously achieved spontaneous clearance (anti-HCV positive individuals with two consecutive negative HCV RNA results 24 weeks apart and did not receive treatment), sustained virological response following treatment (negative HCV RNA result 24 (for IFN-based) or 12 weeks (DAA), after stopping treatment or later
IV. Evidence of HCV genotype and/or sub-type switch

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
300

Key exclusion criteria
Evidence of HCV infection not consistent with the case definition for acute hepatitis C

Date of first enrolment
01/11/2020

Date of final enrolment
31/10/2023

Locations

Countries of recruitment
England

United Kingdom

Study participating centre
St Mary's Hospital
Imperial College NHS Trust
London
United Kingdom
W2 1NY

Study participating centre
Guy’s Hospital
Guy’s & St Thomas’ NHS Foundation Trust
Great Maze Pond
London
United Kingdom
SE1 9RT

Sponsor information

Organisation
Imperial College London

Sponsor details
Joint Research Compliance Office
Imperial College London and Imperial College Healthcare NHS Trust
Room 215, Level 2, Medical School Building
Norfolk Place
London
England
United Kingdom

W2 1PG
+44 (0)207 594 9459
cheuk-fung.wong@imperial.ac.uk

Sponsor type
University/education

Website
https://www.imperial.ac.uk/research-and-innovation/support-for-staff/joint-research-office/hrs/stakeholders/rgit/

ROR
https://ror.org/041kmwe10

Funder(s)

Funder type
Government

Funder Name
National Institute for Health Research

Alternative Name(s)
National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Publication and dissemination plan
The Chief Investigator will co-ordinate dissemination of data from this study. All publications (e.g. manuscripts, abstracts, oral/slide presentations, book chapters) based on this study will be reviewed by any site sub-investigator and by the Sponsor prior to submission. All communication or publications concerning the project, including at a conference or seminar, shall acknowledge the financial contribution of the NIHR.

Intention to publish date

01/06/2024

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request. De-identified data for exploratory analyses and validation of study results will become available at the time of study publication for a period of 10 years. Whole genome sequencing data will be deposited in a publicly accessible database.

IPD sharing plan summary

Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	version V2.0	08/12/2020	01/06/2021	No	Yes
Protocol file	version V2.0	08/12/2020	01/06/2021	No	No
HRA research summary			26/07/2023	No	No