Epidemiology of viral hepatitis in men who have sex with men in Mediterranean Europe: a region-wide sero-surveillance in Rome (Italy)

CURRENT STATUS: UNDER REVISION

BMC Infectious Diseases BMC Series

Simone Lanini

✉ simone.lanini@inmi.it *Corresponding Author*
ORCID: <https://orcid.org/0000-0002-6743-4001>

Silvia Meschi
INMI Lazzaro Spallanzani IRCCS

Laura Scorzolini
INMI Lazzaro Spallanzani IRCCS

Giovanna Adamo
INMI Lazzaro Spallanzani IRCCS

Alessandro Agresta
INMI Lazzaro Spallanzani IRCCS

Fabrizio Marrazzo
Gay Center/ Gay Help Line - Rome

Francesco Angeli
Arcigay - Rome

Massimo Farinella
Circolo di cultura omosessuale "Mario Mieli" - Rome

Carlo Guarino
Regione Lazio

Alessandra Barca
Regione Lazio

Lorella Lombardozzi
Regione Lazio

Adriano Possi
INMI Lazzaro Spallanzani IRCCS

Mirko Manganiello
LAZIOcrea - Rome

Patrizia Magrini
INMI Lazzaro Spallanzani IRCCS

Paola Scognamiglio
INMI Lazzaro Spallanzani IRCCS

Vincenzo Puro
INMI Lazzaro Spallanzani IRCCS

Emanuele Nicastrì
INMI Lazzaro Spallanzani IRCCS

Maria Capobianchi
INMI Lazzaro Spallanzani IRCCS

Alimuddin Zumla
University College London Division of Infection and Immunity

Giuseppe Ippolito
INMI Lazzaro Spallanzani IRCCS

DOI:

10.21203/rs.2.22953/v1

SUBJECT AREAS

Infectious Diseases

KEYWORDS

Hepatitis, Viral, Human, HAV, HBV, HCV, Men Who Have Sex With Men, Serosurveillance

Abstract

OBJECTIVE To describe epidemiology of viral hepatitis (including HAV, HBV and HCV) among men who have sex with men (MSM) aged between 18 and 45 years and living in Lazio, an Italian Region with about 5.9 million inhabitants whose main city is Rome.

METHODS A sero-survey (cross-sectional study) was conducted as part of a screening and prevention campaign for improving control of viral hepatitis in Lazio. The study enrolled 1,100 MSM people participating to the campaign. Outcome measures were serology for HAV (anti-HAV IgG and anti-HAV IgM), serology for HBV (anti-HBs, anti-HBc and HBsAg), and serology for HCV (anti-HCV). Participants' epidemiological features were assessed for potential association with outcomes.

RESULTS We found a very low prevalence of immunity against HAV and a significant exposure to high-risk behaviours, suggesting that gay community of Lazio is an ideal setting for HAV outbreaks.

Prevalence of different serology profiles for HBV suggests that waning immunity and escape to mandatory vaccination still represent a significant issue in patients older than 35 years. Moreover, waning immunity suggests that patients who were vaccinated at birth may show low antibody levels.

Consistently with other studies, prevalence of HCV infection was very low among young MSM.

CONCLUSION Tailored vaccine programme aimed at immunizing MSM are critical to improve control of HAV in our setting. Findings on HBV epidemiology suggest that there is a need to define a clear strategy to recover patients who escaped vaccination and inform clinicians on the need to booster subjects with low immunity and high risk of exposure, such as MSM. Finally, MSM in Lazio do not represent a special group for HCV neither in terms of risk of infection nor in terms of potential issues for therapy access.

Full Text

Due to technical limitations, full-text HTML conversion of this manuscript could not be completed.

However, the manuscript can be downloaded and accessed as a PDF.

Figures

Figure 1

Flow chart for sample selection.

Figure 2

Estimated effect of age on the probability to show a specific HAV sero-status. Immune: detectable anti-HAV IgG and/or anti-HAV IgM. Suceptible: undetectable anti-HAV IgG and anti-HAV IgM antibodies.

Figure 3

Estimated effect of age on the probability to show a specific HBV sero-status. (A) Age cohorts who received vaccination as infants. (B) Age cohorts who received vaccination either as infants or as 12-year children. (C) Age cohorts who received vaccination as 12-year children. (D) People born before implementation of universal vaccine programme. HBV naturally infected: detectable anti-HBcAb. HI-vaccinated: anti-HBs >10 UI/mL and undetectable anti-HBc. LI-vaccinated: anti-HBs between 1 and 10 UI/mL and undetectable anti-HBc. Naïve: undetectable anti-HBs-Ab and anti-HBc.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

Suppl_file_1.pptx
 Suppl_file_3.docx
 Suppl_file_4.docx
 Suppl_file_2.docx