Background
The use of intravenous drugs is the primary way of transmission of Hepatitis C Virus (HCV). Sexual transmission, particularly in patients infected with human immunodeficiency virus (HIV), is also frequently reported. HIV-negative men who have sex with men (MSM), especially those under pre-exposure prophylaxis (PrEP), are a recognised at-risk population.

In this work, we determined the incidence of acute HCV infection and described the risk factors usually associated with its transmission in the setting of an ambulatory PrEP clinic.

Materials and methods
Retrospective analysis of the electronic registries of the patients seen in the PrEP clinic in a tertiary hospital between January 2019 and June 2022.

Results

<table>
<thead>
<tr>
<th>436</th>
<th>Patients assessed in PrEP consultation</th>
</tr>
</thead>
</table>

0.9% (n=4)
Diagnosed with an acute HCV infection

- Men who had sex with men
- Daily regimen of PrEP (TDF/FTC)
- Mean age of 30 years
- Mean average time between the beginning of PrEP and the diagnosis was 326 days (min. 28, max. 717)
- One patient was diagnosed before the introduction of PrEP

Characteristics at the time of diagnosis

<table>
<thead>
<tr>
<th>Viral load IU/mL</th>
<th>ALT levels IU/L</th>
<th>Abdominal Ultrasound</th>
<th>FibroScan*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient 1</td>
<td>6399209</td>
<td>876</td>
<td>Normal</td>
</tr>
<tr>
<td>Patient 2</td>
<td>1200</td>
<td>58</td>
<td>Normal</td>
</tr>
<tr>
<td>Patient 3</td>
<td>23196</td>
<td>245</td>
<td>Normal</td>
</tr>
<tr>
<td>Patient 4</td>
<td>462</td>
<td>124</td>
<td>Hepatic steatosis</td>
</tr>
</tbody>
</table>

ALT↑ All at the time of diagnosis
2 in the previous evaluation (with negative HCV Ab)

Risk factors

- MSM without a stable partner
- 2 had unprotected sex
- None of the patients were intravenous users
- All with at least one other sexually transmitted disease (STD)
  - Neisseria gonorrhoeae – oral and anal
  - Syphilis – one secondary, two late latent

Treatment
At the time of writing, two patients are undergoing treatment for HCV infection (with Glecaprevir/pibrentasvir), one has completed the treatment with a sustained virological response at 24 weeks post-therapy (with Sofosbuvir/velpatasvir). The other one is waiting to start the treatment.

The number of acute HCV infections is increasing in HIV-negative patients, especially in MSM under PrEP. It is important to notice that risk factors are mainly associated with behavioral habits and the elevation of ALT can precede the seroconversion. This underlines the importance of regular surveillance to allow an early diagnosis and prompt treatment, particularly in this population with risk factors for the transmission.