HCV reinfection following successful direct-acting antiviral treatment among people who inject drugs: Preliminary results from a low-threshold treatment setting

Håvard Midgard[1,2,3], Kjersti Ulstein[4], Øystein Backe[4], Kristin Vennesland[4], Linda Wüsthoff[4], Olav Dalgard[1,3]

[1]Akershus University Hospital, Norway; [2]Oslo University Hospital, Norway; [3]University of Oslo, Norway; [4]Agency for Social and Welfare Services, City of Oslo, Norway.

Disclosures

- Consultant/advisor and lecture fees from Abbvie, Gilead and MSD
- The clinic uses a mobile transient elastography device donated from Abbvie

Background/aims

- Ongoing injecting risk behaviours following HCV treatment among PWID may lead to reinfection, reversing the benefits of cure
- Rates have been reported at ~2/100 PY among lifetime PWID and ~5/100 PY among recent PWID or PWID in OST[1,2]
- There is little data on reinfection following DAA treatment, particularly among recent PWID
- **The aim of this study was to calculate the incidence of HCV reinfection following successful DAA treatment in a population with recent injecting drug use**

[1] Midgard et al. J Hepatology 2016; [2] Dore et al. Ann Intern Med. 2016

Methods

- A low-threshold HCV clinic for PWID was established in downtown Oslo in 2013
- Located within the premises of the city's harm reduction services (NSP, drug consumption room, general health clinic, emergency housing)
- Inclusion criteria
  - Recent injecting drug use (past 3 months prior to treatment)
  - Achieved ETR following DAA treatment between 2014 and August 2017
- Participants followed at 3 months intervals with HCV RNA and self-reported risk behaviours
- Viremic samples stored at -70°C for NGS analysis
- Incidence rates calculated using person-time techniques assuming a Poisson distribution

Results: Study participants (n=53)

- Mean age 46 years, 78% male
- Stage of liver disease
  - 6% LSM <7 kPa
  - 56% LSM 7-12,5 kPa
  - 38% LSM >12.5 kPa
- Genotype distribution
  - 56% GT1
  - 9% GT2
  - 35% GT3
- 86% received OST and all had access to NSP
- 93% injected during and following treatment

Results: HCV RNA recurrence

- Post-ETR HCV RNA recurrence observed in 2/53 (3.8%) individuals over 48.7 PY
- Mean follow-up time 0.93 years

	Gender/age	GT at baseline	LSM	Regimen	GT at recurrence	OST	NSP	IDU during treatment	Sharing
Case 1	Male 42	1a	45 kPa	SOF + SIM	1a	yes	yes	frequent	yes
Case 2	Female 45	3a	14 kPa	SOF + DCV + RBV	3a	yes	yes	frequent	yes

- Incidence of potential reinfection 4.1/100 PY (95% CI 0.50-14.8)
- Results from NGS for final reinfection/relapse diagnosis are pending

Conclusions/implications

- Preliminary results from a Norwegian low-threshold clinic for recent PWID show low rates of post-ETR HCV RNA recurrence with 2 potential cases of reinfection (incidence 4.1/100 PY)
- Results indicate that reinfection may occur despite frequent post-treatment follow-up and optimized harm reduction
- Strategies to sustain virological cure for PWID and reduce the negative impact of reinfection are needed
    - Education and counselling
    - Systematic monitoring, detection and retreatment

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Study participants

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More data from Oslo

Poster #131

Feasibility and efficacy of DAA treatment of HCV infection in a low-threshold setting

Poster #80

The HCV care cascade among PWID in a Norwegian low-threshold setting