Evaluation of HCV Infection in Active Injection Drug Users

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Prevalence and Incidence

- Approximately 242,000 Canadians are living with chronic hepatitis C, and a significant portion of this population are People Who Inject Drugs (PWID)[1]

- HCV infected PWID make up 66% of the entire PWID population[1]

- Every year in Canada, approx. 8,000 new HCV infections are diagnosed, of which 6,600 are PWID[1]

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• Past Canadian treatment guides recommend an abstinence period of at least 6 months[2]

• Current guidelines do not call for abstinence periods[3]

• AASLD and EASL support treatment of PWID and advise treatment in a multidisciplinary setting[4][5]

• Australian National Hepatitis C Strategy (2014-2017) also calls for enhanced care of PWID and defines them as a “Priority Population”[6]


Current Practice

• Despite new guidelines, some physicians still adhere to old models requiring a 6-12 month period of abstinence before HCV treatment is considered

• Legitimate concerns include:
  o Adherence
  o Ongoing drug use
  o Relapse to drug use
  o Risk of exacerbation of co-morbid psychiatric issues
  o Risk of reinfection

• STIGMA: Do not treat them, “they [PWID] will just relapse”.

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Hypotheses

- HCV regimens are effective in treating current PWID when delivered within a multidisciplinary setting.

- There is **no rationale** to support a 6-12 month drug-free period before HCV treatment is considered in PWID.
Inclusion Criteria

• Chronic HCV infection with any genotype

• Injection of any form of recreational drug within 6 months of commencing HCV treatment

• No specific age, race or gender-related inclusion criteria

• The goal was to select for heavy PWID, injecting during treatment – our most “difficult” patients.
Our Model of Care

• Medical Needs
• Physiological/Psychiatric needs
• Addiction-related needs
• Social needs
Data Collected

- Patient data were collected, through chart review, for individuals that met the inclusion criteria, such as:
  - Demographics
  - Infection statistics
  - Treatment statistics
  - Liver condition and fibrosis assessments
  - Injection drug use history
  - Psychological conditions
Endpoint

• Primary study endpoint: achievement of sustained virologic response (SVR)
  o Undetectable HCV RNA 12 weeks post-treatment

• Correlates of SVR by statistical analysis:
  o Recreational drug use
  o Demographic variables
  o All-oral vs. IFN-based HCV therapy
  o HCV genotype
• N = 40 (median age 53 years)

• 11 (28%) co-infected with HIV
• 23 (58%) on opiate substitution therapy
• 11 (28%) cirrhotic
Regimen Distribution

- IFN-Based*: 15
- All-Oral: 25

* N=25

- 10 (40%): IFN/RBV
- 9 (36%): IFN/RBV/Oral
- 6 (24%): Other research based regimens
Overall SVR Rate

Regimen Distribution SVR Rate

*** P < 0.05 favoring all oral regimens
All-Oral SVR Failure

• 1 patient failed to achieve SVR

• Patient profile:
  o 59 year-old male
  o GT 3a
  o HCV load : 7.13 (Log10 IU/ML)
  o Cirrhotic
  o On 4th course of treatment
  o Prescribed SOF/RBV
  o Relapse
Results (cont.)

SVR Rate vs. HCV Genotype & PWID Status

- 100% SVR for GT 4
- 3/5 GT 2 achieved SVR
  - 2 non-SVR patients were on older, short-term (12wk) IFN/RBV regimens
Results (cont.)

Failure to Achieve SVR

- Toxicity: 3
- Relapse: 4
- Other: 2

Legend:
- Blue: Toxicity
- Red: Relapse
- Orange: Other
Recurrent Viremia

• PWID have a high chance of becoming re-infected with HCV through needle use.

• In our multidisciplinary setting, with an average of 560 days of follow-up per patient, there were no cases of recurrent viremia.
Discussion

- VIDC has developed a unique model of multidisciplinary care for the diagnosis and treatment of HCV-infected PWID living in the inner city.

- We have evaluated a subset of active PWID to establish whether the model (with enhanced outreach services) would be successful in a more “difficult” population

- SVR rates remained high

- No demographic or behavioral correlates of failure to achieve SVR were identified
Conclusion

• Heavily active PWID can be effectively treated for HCV infection with high SVR rates

• All-oral regimens are especially effective and will be an important tool of engagement in this population going forward (Using the medical system as a tool for positive social change)

• With structured post-treatment follow-up, rates of recurrent viremia can be minimized.

• Based on this success, we aim to utilize our model to increase treatment uptake in high-risk populations of “core transmitters” of HCV infection.