Sustained virological response to hepatitis C treatment with direct acting antivirals in people who inject drugs (PWID) and non-PWID: Results of a national comparative survey from Slovenia

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INTRODUCTION

Treatment of hepatitis C virus (HCV) chronically infected patients with direct acting antivirals (DAAs) has shown excellent efficacy also in people who inject drugs (PWID). HCV-seroprevalence among PWID in Slovenia is estimated between 23-30% which is among the lowest in the European region. This rate reflects the early introduction of various well-established harm reduction interventions. A multidisciplinary national healthcare network which integrates 18 Centers for the prevention and treatment of drug addiction and five hospital-based clinics for treatment of viral hepatitis was established in 2007 together with the Slovenian national consensus guidelines for the management of HCV infection in PWID. Direct acting antivirals represent a standard of care since January 2015.

AIM

The aim of the study was to compare a real-life efficacy of DAA treatment between PWID and non-PWID at a national level.

METHODS

All HCV-infected patients from Slovenia who initiated DAAs (simeprevir, sofosbuvir, paritaprevir/ombitasvir±dasabuvir, sofosbuvir/ledipasvir, elbasvir/grazoprevir, and sofosbuvir/velpatasvir) between January 2015 and December 2017 were included prospectively on intention to treat (ITT) and modified ITT (mITT) analyses. Demographic, epidemiological, virological and clinical data were collected from all settings providing HCV treatment in Slovenia and analysed according to the history of injecting drug use. Sustained virological response (SVR) was defined as negative HCV RNA detected at a 12-week follow up after the termination of treatment.

RESULTS

Overall 400 patients were included, 176 (44%) were PWID. Average age was significantly lower in PWID (44 years), compared to non-PWID (56 years) (CI=99%, p=0,001). There were significantly more males among PWID (82%) compared to non-PWID (50%) (CI=99%, p<0,001). Comparing PWID and non-PWID, fibrosis stages F3 and F4 were reported in 24% vs. 26%, and 46% vs. 42%, respectively, with no significant differences (Figure 1). Genotype 1 was significantly more common in non-PWID (84%) (CI=99, p<0,001) and genotype 3 was significantly more common in PWID (42%) (CI=99, p<0,001). 78% of PWID and 55% of non-PWID were treatment naïve, the difference being significant (CI=99, p<0,001). SVR rate in ITT analysis was significantly higher in non-PWID (95%) compared to PWID (85%) (CI=99%, p=0,001) (Figure 2). Nine PWID discontinued treatment for unknown reasons and 10 failed 12-week follow-up (FU12) after end-of-treatment response. In mITT analysis, SVR was achieved in 149/153 (97%) of PWID and in 213/219 (97%) of non-PWID (Figure 3).

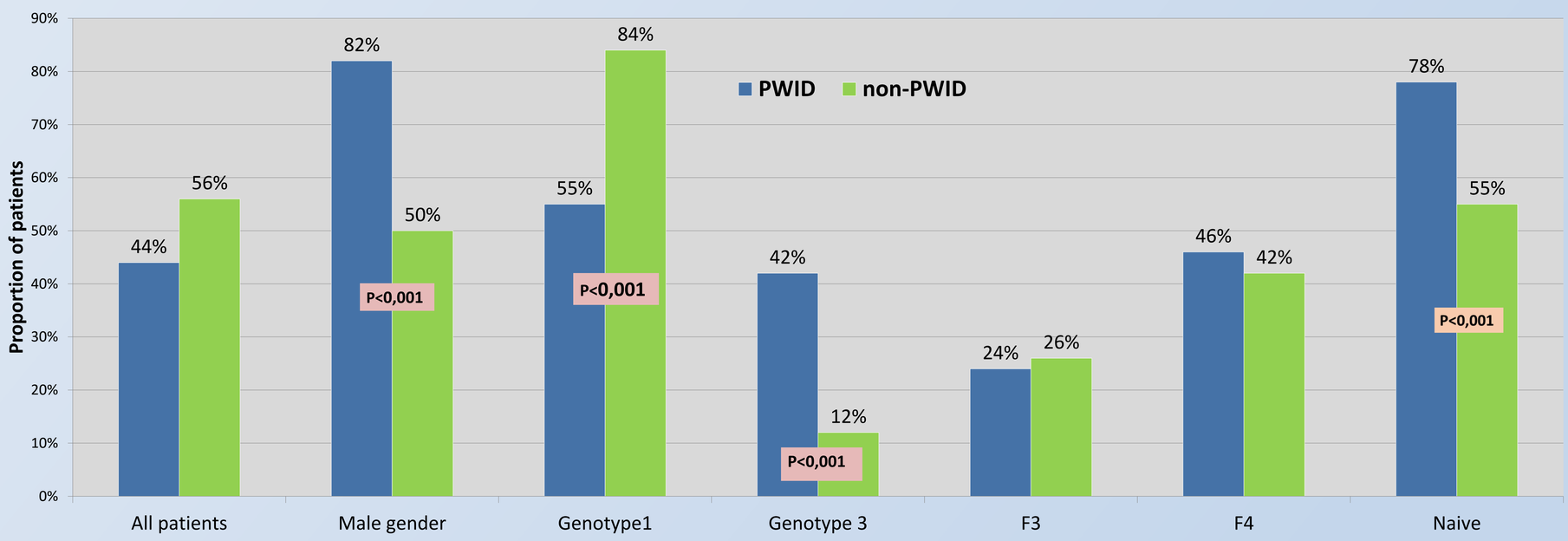

Figure 1. Comparison of demographic, clinical and epidemiological charasteristics between the two groups (N=383); PWID: people who inject drugs; F: stage of fibrosis according to METAVIR scaling system..

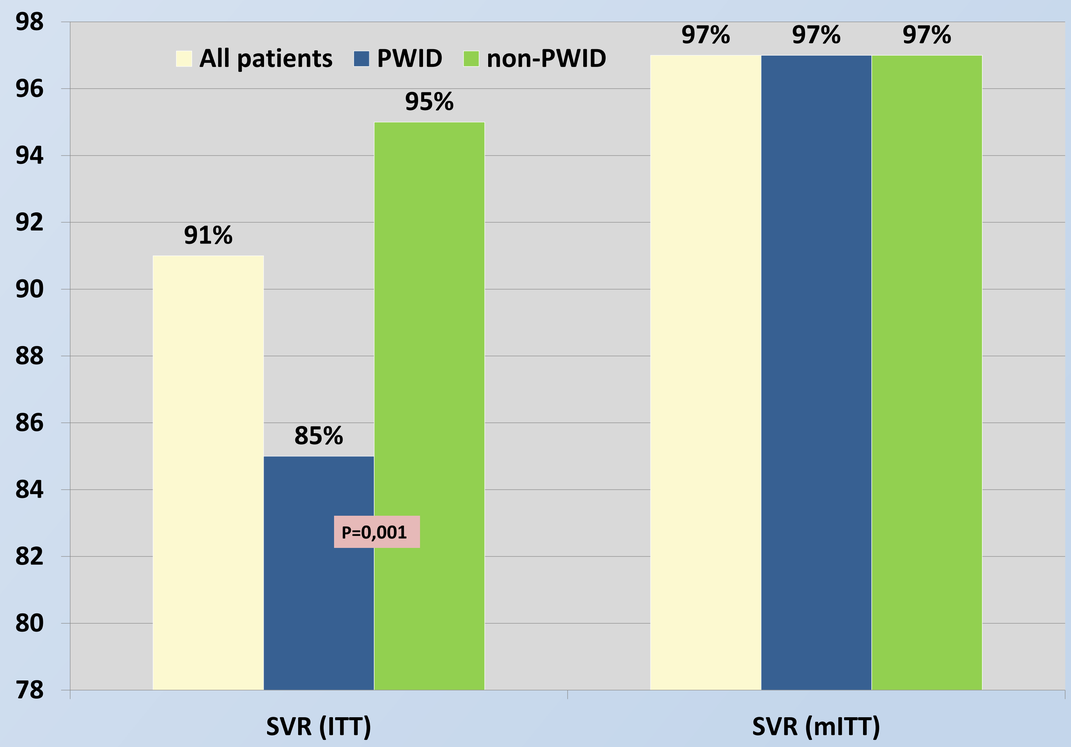

Figure 2. The proportion of patients who achieved sustained virological response by intention to treat (ITT) and modified intention to treat (mITT) analyses (N=383); PWID: people who inject drugs.

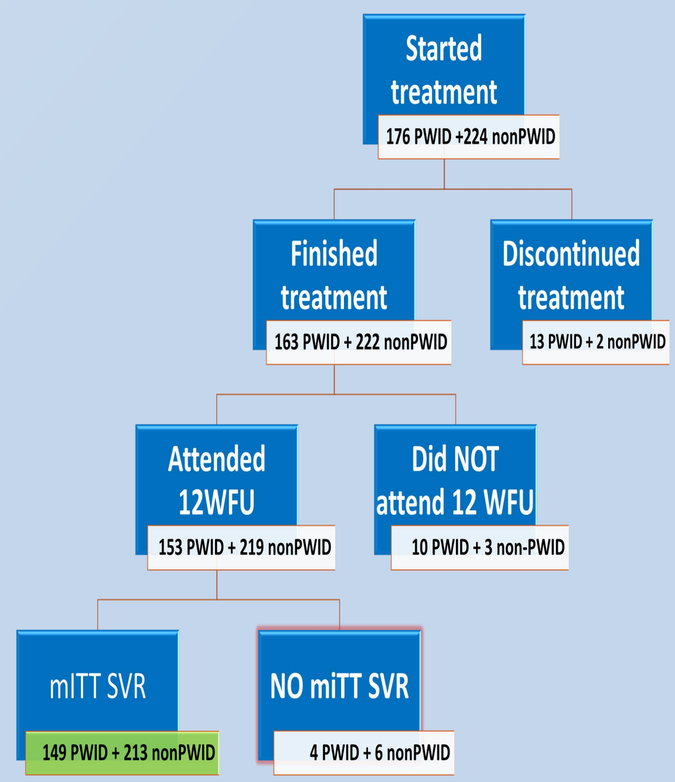

Figure 3. Study tree.

CONCLUSION

The results of this real-life study demonstrate excellent SVR rates of DAA treatment also in the PWID. When analysed on intention to treat analyses better results were achieved in non-PWID. However when excluding patients with treatment discontinuation for unknown reasons and the lack of 12WFU the SVR rates were comparable between the two groups.

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