ATTENUATED PROTECTIVE EFFECT OF OPIOID AGONIST THERAPY ON HEPATITIS C INCIDENCE AMONG FEMALES

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Introduction:
Opioid agonist therapy (OAT) has been shown to reduce hepatitis C virus (HCV) incidence by 50% among people who inject drugs (PWID). Recent research suggests that the protective effects of OAT may be attenuated in females compared to males. This study aimed to assess differences in HCV incidence by sex among PWID engaged in OAT and to identify factors independently associated with decreased efficacy.

Methods:
Inc3 pooled biological and behavioural data from 10 prospective observational studies examining incident HIV and HCV infections in high-risk cohorts. This study synthesised data from seven of the ten cohorts. Cox proportional hazards regression models with random effects for handling clustered survival data were used to identify predictors of incident HCV infection. Entry in each study to the estimated date of HCV infection was used to calculate person-year observation (PYO) and adjusted hazard ratios (aHRs) among participants who reported recent (last 12 months) OAT (methadone, buprenorphine or buprenorphine-naloxone).

Results:
701 participants reported engagement in OAT (observed over 3,003 visits). HCV incidence (per 100 PYO) among females engaged in OAT was 16.5 PYO (95% CI 13.1-20.7), and 7.6 PYO (95% CI 6.0-9.5) among males. The female to male aHR was 1.77 (95% CI 1.45-2.17, p<0.001). Factors associated with decreased efficacy of OAT among females included non-white race (aHR 1.72, 95% CI 1.21-2.44, p=0.002), recent unstable housing (aHR 3.04, 95% CI 1.98-4.67, p<0.001) and injecting daily or more frequently (aHR 2.10, 95% CI 1.15-3.83, p=0.016).

Conclusion:
Among respondents engaged in OAT, HCV incidence among females was twice that compared to males. Independent associations with attenuated effect included bio-social (non-white race), structural (unstable housing), and behavioural (frequent injecting) factors. Structural and behavioural interventions that target women are needed to bolster the efficacy of OAT in females in order to prevent HCV transmission.

Disclosure of Interest Statement:

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