

CORRELATES OF HIGHER FEMALE TO MALE HCV INFECTION AMONG PEOPLE WHO INJECT DRUGS: RESULTS FROM THE INTERNATIONAL MULTI-COHORT INC3 COLLABORATIVE.

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Background:

Previous finding in the InC3 collaborative study shows among people who inject drug (PWID), females are at 38% higher risk of HCV infection than males. This finding is consistent with meta-analysis, which showed that females have a 36% higher risk of HCV infection. The objective of this study was to assess the modifying effect of the exposures known to be associated with higher HCV infection in female.

Methods:

HCV infection date was estimated based on a hierarchy of successive serological (anti-HCV), virological (HCV RNA) and clinical (symptoms and/or liver function tests) data. We used a Cox proportional hazard model to calculate the crude and adjusted female to male hazard ratio for HCV incidence using biological sex as the main exposure. Also, we assessed the interaction effect of behavior or demographic characteristics on F:M adjusted hazard ratio in the multivariate Cox regression model.

Results:

A total of 1868 PWID were observed over 3994 person-years observation (PYO). Although syringe and equipment sharing were associated with the highest HCV incidence rate in females (41.62 and 36.83 PYO, respectively), we found no sex differences attributed to these risk factors. In contrast, non-white (P=0.013) females constantly had the highest rate of HCV infection compared to their male counterparts. Also, we found that the protective effect of medication-assisted treatment (MAT) was much less pronounced for females (P=0.035).

Conclusion:

These findings highlight sex disparities in HCV risk and acquisition. Ongoing work to

assess mechanisms underlying these differences is important. And, implementation and assessment of sex-based interventions should be considered as a potential strategy to address the risk differential between male and female PWID.

Aryan Esmaeili has no conflicts to disclose.