

Perinatal and Obstetrical Outcomes in HIV Mono-Infection and HIV/Hepatitis Co-Infection

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Introduction and Objectives

- At the end of 2011, an estimated one of every 100 Canadians were antibody positive for hepatitis C. In 2017, 39% of new diagnoses were among women, and of those, women ages 25-29 comprise th largest cohort at 56.7 cases per 100,000
- HIV and Hepatitis C both carry independently attributable perinatal and obstetrical risk. For women living with HIV, these include preterm birth and low birth weight.
- Perinatal outcomes in women living with HIV and those co-infected with hepatitis C were compared in a Canadian cohort including patient demographics, treatment and virological status as they relate to obstetrical and neonatal outcomes.
- We aim to ascertain the extent to which HIV and Hepatitis C co-infection and other variables contribute to obstetrical and perinatal outcomes

Methods

- Data was collected from the BC provincial perinatal HIV surveillance database. Clinical, demographic, and behavioural data are abstracted from clinical charts and entered annually into this surveillance database.
- Outcomes were compared in women living HIV with and those co-infected with hepatitis C, defined as hepatitis C antibody reactivity.
- Descriptive statistics were used to summarize baseline characteristics and follow-up details.
- Frequencies and proportions, along with 95% confidence intervals, were calculated for the primary and secondary outcomes (rates of disease, additional follow visits, and re-treatment).
- P-values are from Wilcoxon rank sum tests for continuous variables and Fisher exact tests for categorical variables.

Results

		Maternal HepC Ab status		P-value
		Negative/NR	Positive/Reactive	
	Total	No. 288	No. 197	
	No. 485			
Age				
Mean (SD)	31.0 (±5.6)	31.5 (±5.8)	30.3 (±5.1)	0.023
Preterm delivery				
<37 weeks	110 (22.68%)	37 (12.85%)	73 (37.06%)	< 0.0001
≥37 weeks	369 (76.08%)	249 (86.46%)	120 (60.91%)	
Live birth				
Stillbirth	7 (1.44%)	2 (0.69%)	5 (2.54%)	0.13
Live birth	477 (98.35%)	285 (98.96%)	192 (97.46%)	
Neonatal death	1 (0.21%)	1 (0.35%)	0 (0.00%)	
CD4 nadir				
Mean (SD)	282.1 (±178.7)	306.3 (±177.8)	234.6 (±171.8)	0.003
CD4 near delivery				
Mean (SD)	522.9 (±270.7)	578.0 (±273.1)	440.8 (±245.8)	< 0.0001
HIV pVL near delivery - suppressed vs not				
Not suppressed	97 (20.0%)	36 (12.5%)	61 (31.0%)	< 0.0001
Suppressed	357 (73.6%)	239 (83.0%)	118 (59.9%)	

Discussion

- A total of 485 WLWH were included, of these 197 had a history of hepatitis C infection.
- There was a statistically significant increase in preterm birth (RR = 4.2) and stillbirth (RR=3.57) rates among women who were Hepatitis C antibody positive.
- There was a significant difference in ARV use, adherence and subsequently viral load at delivery between both groups.
- Canadian women who were have HIV and a history of HCV infection, had an increased risk of preterm birth and stillbirth compared to women with HIV alone.
- This is likely in part due to differences in HIV disease, social determinants of health and cART adherence.
- However, more research is needed to further qualify this relationship, and understand the role of social determinants of health versus active Hepatitis C infection in the etiology of adverse obstetrical outcomes.

References

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