

Presenting Author Name

Leeza Goldberg

Phonetic spelling of your (full) name

Lee-za

Presenting Author Category

Undergraduate Student

Supervisor Name

Dr. Santana Lee

GBD Audio File

dr goodbear's den.m4a

Headshot

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Short Bio (100 words)

I am a second year medical student at the University of Manitoba who loves everything child health related! I am especially excited about this field because of the opportunity to make a huge difference early in life, with impacts that can extend into adulthood. My current project examines central nervous system involvement in congenital syphilis in Manitoba. Ultimately, I hope to build a career where I can help solve clinical questions through research and bring those answers back to the bedside as a physician to improve health outcomes for children and their families.

Research Category

Clinical

Abstract Title

Central Nervous System Involvement in Congenital Syphilis: A Manitoba Cohort

Authors

Name	Role	Profession
Leeza Goldberg	Presenting Author	
Dr. Rachel Dwilow	Co Author	Assistant Professor
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Background

Congenital syphilis (CS) has re-emerged as an important cause of neonatal morbidity in Manitoba, prompting universal antenatal syphilis screening beginning in 2019. Central nervous system (CNS) involvement is difficult to identify because infants are often asymptomatic, and its prevalence in Manitoba is unknown.

Objective

This study aims to estimate CNS involvement among infants with confirmed early CS, identify associated clinical and laboratory characteristics, and compare CNS involvement before and after universal antenatal screening was implemented.

Methods

This preliminary analysis of a retrospective case-control study compares infants with confirmed CS born between 2015-2024, with and without CNS involvement. Infant and maternal demographics and infant clinical and investigation results were extracted from medical records. Neurosyphilis was defined by positive cerebrospinal fluid (CSF) VDRL, syphilis PCR, or elevated CSF leukocytes or protein without another cause. Infant groups were compared using Welch's t-test or Mann-Whitney U tests, as appropriate; study periods were compared using chi-square.

Results

Among 234 infants, 68 had confirmed early CS. 60 (88.2%) had successful lumbar punctures and were evaluable for CNS involvement, of whom 40 (66.7%) had neurosyphilis. CNS involvement did not differ between 2015-2019 and 2020-2024 (75.0% vs. 63.6%; $p=0.409$). Infants with neurosyphilis had lower median gestational age (35.5 weeks [IQR 32.8-38.0] vs. 38.0 weeks [IQR 36.0-38.5]; $p=0.008$), lower mean birth weight (2.48 ± 0.84 kg vs. 3.20 ± 0.47 kg; $p<0.001$), and higher serum RPR titres (median 1:64 [IQR 1:16-1:128] vs. 1:8 [IQR 1:4-1:16]; $p<0.001$).

Conclusion

Preliminary findings suggest a high burden of CNS involvement in infants with confirmed CS in Manitoba, without significant difference between study periods. Gestational age, birth weight, and RPR titre were associated with neurosyphilis, identifying potential markers of CNS involvement. Reliable markers may improve risk stratification and infant management. Ongoing case ascertainment and multivariable analyses will determine whether these associations persist after adjustment for confounders.