CHRD 2024: Abstract Submission Form

Presenter Name
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Presenter Status
Non-Trainee

Role in the project
Write Abstract

Research Category
Clinical

Title
The effect of the HNF1-α G319S polymorphism on kidney health of children in the Next Generation cohort exposed to type 2 diabetes in utero

Background
Exposure to type 2 diabetes (T2D) in utero is associated with long-term risk of chronic kidney disease. The HNF1-α G319S polymorphism increases the risk of developing T2D, however, associations with kidney outcomes prior to diabetes onset is unknown.

Objective
We sought to evaluate kidney health in children exposed to T2D in utero with and without the HNF1-α G319S polymorphism.

Methods
This is a cross-sectional analysis of participants from the Next Generation cohort who were exposed to T2D in utero, normoglycemic and 5 to 11 years old. Outcomes (glycosuria, random urine albumin: creatinine ratio (ACR), albuminuria status (ACR>3mg/mmol) and hypertension status) were analyzed using descriptive statistics.

Results
A total of 142 participants were included in the analysis (52.1% female, 8.98±1.91 years, median BMIz {2.20 [1.73, 2.46]}, median Hemoglobin A1C {5.50 [5.30, 5.70]}). The wildtype group (n=67) had 4 participants with albuminuria while the variant group (n=75) had no one with albuminuria. None of the participants in either group tested positive for glycosuria. Median ACR was (0.50 [0.30, 0.92] vs 0.60 [0.30, 0.90], p = 0.616) and hypertension rates were 57.4% vs 61.0%, (p = 0.843) in the wildtype and variant group respectively.

Conclusion
We observed no glycosuria and low rates of albuminuria in the cohort. There were high rates of hypertension in both groups, which requires further investigation to determine its association with exposure to T2D in utero.

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