Abstract #31 (0346_0513_000040)

CARDIO-RENAL COMPLICATIONS BY HYPERTENSION TYPE IN YOUTH WITH TYPE 2 DIABETES (T2D)

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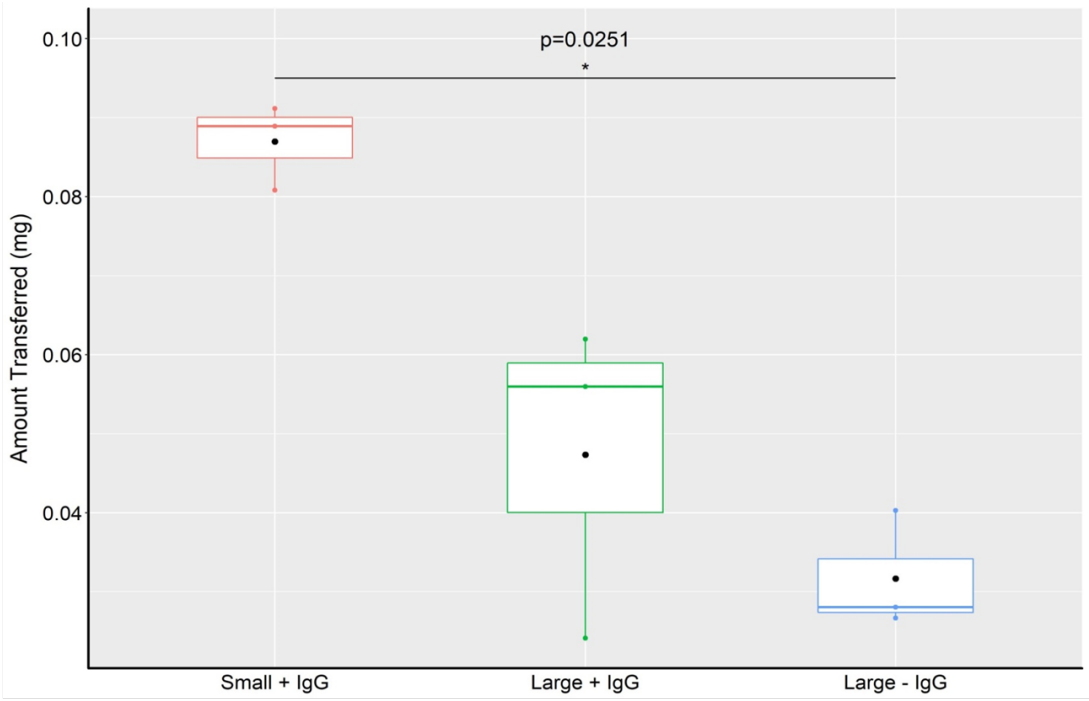
Background:
Despite high rates of complications and recent recommendations from the American Academy of Pediatrics, the use of 24-hour ambulatory blood pressure monitoring(ABPM) has not been routinely implemented into clinical care for youth with T2D.

Objective:
This work evaluated cardio-renal complications in youth misclassified by clinic blood pressures (i.e. White-coat or masked hypertension).

Methods:
A cross-sectional comparison of early cardio-renal complications including carotid intima media thickness(cIMT), left ventricular hypertrophy(LVH), and non-orthostatic albuminuria was conducted among youth with T2D from the iCARE cohort, by type of hypertension. Youth were stratified based on comparison of clinic and ABPM results as normal, white-coat, masked or ambulatory hypertension using recommended thresholds.

Results:
Of the 105 youth studied [(14.5±1.9yrs), body mass index z-score(BMIz) of 1.9±0.9, and median diabetes duration of 1.9(0.9,3.5) years], 19% had white-coat, 27.6% had masked hypertension . Compared to normotensive youth, BMIz, ACR and ALT were elevated hypertension groups(Table 1). No differences in HbA1c, LVH or cIMT were observed.

Conclusion:
This study highlights the high proportion of youth with white-coat and masked hypertension. Longer-term follow-up is required to evaluate the clinical implications of hypertension in this population.



Size (nm)	414± 27	805 ± 43	375 ± 17
Amount Transferred	16% (0.0870 mg)	8% (0.0473 mg)	6% (0.0317 mg)

Figure 1. Transplacental transport of nanoparticles surface-modified with IgG across a placental epithelial transwell model was achieved.