Non-clinical **POSTER/ORAL**

Chronic Post-partum Changes of Mesenteric Arteries in Nω-Nitro-L-Arginine Methyl Ester Hydrochloride (L-NAME)- induced Hypertension in Pregnant Rats Model.

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Introduction: Women with history of hypertensive disorders of pregnancy (HDP) have four-fold increased risk to develop cardiovascular diseases later in life. It has been postulated that the transient increase in blood pressure (BP) during pregnancy leads to ongoing endothelial dysfunction even though BP is normalized during postpartum. A balanced production of endothelin-1 (ET-1) and nitric oxide (NO) is important for BP regulation. This study aims to investigate the chronic postpartum effects of hypertension during pregnancy on the mesenteric arteries. **Materials and method:** 24 female Sprague-Dawley (SD) rats were assigned to four groups (n=6). Hypertension was successfully induced in the treated groups given 125mg/kg/day of L-NAME. All groups were sacrificed at Day 30 postpartum. Histopathological study of mesenteric arteries and ELISA analyses were done to measure ET-1 and NO levels. **Results:** The endothelial cells were seen as a single squamous cell with flatten nucleus. No obvious abnormalities were observed in the treatment groups. The media to luminal ratio did not show significant alteration in the treatment groups. The endothelial cells number to length ratio remains the same across the groups. In addition, the concentration of ET-1 and NO were not significantly different in the treatment groups. **Conclusion:** Based on the current studies, there is no evidence that demonstrate abnormal changes to the endothelium and tunica media of the resistance artery in long-term duration following HDP. However, further investigation of its potential chronic effect warrants a deeper analysis at the endothelial receptors and alteration at ultrastructure level.