**STUDY DESIGN:** On day 14 of gestation (GD14), the RUPP procedure was performed and HET0106 was administered GD14-18 (i.p., 1mg/kg/day). Uterine artery Resistance Index (UARI) was measured via sonography on GD18 and blood pressure (MAP) was measured on day GD19 by direct catheterization of the carotid artery.

**RESULTS:** Pup reabsorption, calculated as % of total pups at GD19, was 6.5±1.0% in NP and 58±6% in RUPP rats (P<0.05). Treatment with HET0106 significantly reduced reabsorption rate to 2.1±0.7% in RUPP (P<0.05) and 1±1% in NP rats. UARI increased in RUPP rats compared to NP (0.7±0.04 vs 0.6±0.02) and was reduced in RUPP+HET0106 rats (0.56±0.07). Plasma IL-6 was increased in RUPP rats relative to NP (133.8±21.1 vs 109.9±13.7 pg/ml) and was reduced to 118.2±25.0 pg/ml in RUPP+HET0106. MAP was elevated in RUPP compared to NP rats (122±3 vs 104±3 mmHg, P<0.05), and was significantly reduced to 112±3 mmHg in NP+HET0106 rats (P<0.05), and remained unchanged in NP alone (105.7±4.6 mmHg).

**CONCLUSION:** In conclusion, 20-HETE inhibition blunted the rise in blood pressure, reduced fetal reabsorption, UARI, and elevations in IL-6 in the RUPP rat model of PreE.

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**476 Maternal cardiac hemodynamics in normotensive vs. pregnancies with preeclampsia—did we find a helpful tool?**

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**OBJECTIVE:** We aimed to compare hemodynamic variables before a Cesarean Section (CS) and 48 hours post-partum in healthy versus pregnant women with hypertension with severe features using the Non-Invasive Cardiac System (NIcAS).

**STUDY DESIGN:** NIcAS is an impedance device that measures non-invasively the cardiac output and its derivatives and was previously validated by demonstrating good correlation with measurements of the gold standard Swan-Ganz catheter. We performed a prospective longitudinal study of healthy normotensive pregnant women (control group) versus women with hypertension with severe features (PET group). Preeclampsia with severe features was defined according to the ACOG criteria.

All pregnant and nonpregnant women were assessed for hemodynamic parameters including Cardiac Output (CO), Total Peripheral Resistance (TPR) and Mean Arterial Pressure (MAP) using the NIcAS before the beginning of the CS and 48 hours post-partum.

**RESULTS:** We recruited 81 patients to the control group and 15 patients to the PET group. The mean gestational age was 38.8±0.6 weeks vs. 35.1±2.9 weeks, respectively (P<0.005). Mean maternal age and Body Mass Index (BMI) were similar between the groups.

CO during the third trimester was significantly higher in the control group compared to the PET group (7.6 L/min vs. 6.1 L/min respectively, P<0.005). Within 48 hours post-partum CO of both groups had reached similar values. The TPR was significantly higher in the PET compared to the control group (P<0.005) at both points of assessment (third trimester and 48h post partum). Likewise, the MAP was significantly higher in the PET group compared to the control group at both time points (P<0.005 third trimester and P<0.05 48 hours post operation).

**CONCLUSION:** The PET group in this study demonstrated low CO and high TPR profile compared to normotensive pregnant women. It is well known that PET shows varied hemodynamic profiles. The accuracy and noninvasiveness of the NIcAS opens a window of opportunity, aiding in evaluating and separating between these profiles. This might help the clinician to customize an optimal therapy on case-to-case basis. Our study is important for assessing treatment for patients with hypertension, but requires further studies of larger cohorts.

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**477 Preeclampsia (PE) and global dysregulation of placental alternative RNA splicing events**

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**OBJECTIVE:** Alternative RNA splicing is evolutionarily advantageous as it allows expansion of protein diversity in response to environmental challenges without need of new DNA synthesis. However, dysregulation in alternative splicing can lead to pathologic mutations reflected in defective proteins and toxic RNA species. We sought to explore if placental PE transcriptome displays dysregulation of RNA splicing events.

**STUDY DESIGN:** The villous placental transcriptome was evaluated in women with severe PE (sPE, n=4, GA: 30±2 wks). For comparison, we queried villous placental biopsies of women matched for GA with spontaneous idiopathic preterm birth (iPTB, n=5, GA: 32±2 wks), and physiologic pregnancy at term (n=5, GA: 39±1 wks). Deep RNA sequencing was performed using the Illumina HiSeq 2500 platform. Differential RNA splicing event detection based on Reciprocal-isoform Percent Spliced-In (Ri-PSI) analysis, together with gene-set enrichment analysis, was performed using AltAnalyze software.

**RESULTS:** Numerous disturbances in alternative RNA isoforms were discovered between iPTB and normal term placentas (271 events in