worker practice norms, and supply chain functioning. Factor confluence has implications for quality of care and outcomes experienced by women with PE/E.

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### 290. Investigation of placental proteome of pregnant stroke-prone spontaneously hypertensive rats

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*Introduction:* The stroke-prone spontaneously hypertensive rat (SHRSP) obtained by selective inbreeding of the Wistar-Kyoto (WKY) strain is a well-characterized model of cardiovascular disease. The phenotype of the pregnant SHRSP is reflective of the clinical condition of maternal chronic hypertension during pregnancy.

*Objective:* We investigated whether placental proteomics can identify candidate molecules involved in placental dysfunction in pregnant SHRSP.

*Method:* Placental proteome of pregnant WKY and SHRSP (n = 5) at gestational day 18 were analyzed using label-free proteomics. Identification and quantitation of protein was performed using LC-MS/MS connected to an LTQ Orbitrap hybrid mass spectroscopy. Functional annotation and gene ontology of proteome was carried out using bioinformatics tools such as DAVID, STRING and Cytoscape.

*Result:* Comparison of SHRSP and WKY identified total of 1318 proteins, amongst these 686 were extracellular exosomes proteins, followed by 663 cytoplasm, 486 nucleus and 383 membrane proteins. There were 363 differentially expressed proteins (*p value < 0.05*), of which 115 and 227 protein were found to down-regulated and up-regulated in SHRSP respectively, with a fold change cut-off > 1.3. Protein interaction networks and gene ontology analysis of these proteins identified major biological process such apoptosis, inflammation, oxidative stress, cell adhesion and migration. We also found 7 and 14 proteins to be uniquely identified only in WKY and SHRSP respectively (*p value < 0.05*).

*Discussion:* The study shows characteristic proteomic pattern in placenta of SHRSP. Further studies into the differentially expressed candidate proteins will give insight into the placental dysfunction in hypertensive pregnancy.

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### 292. Risk factors for superimposed preeclampsia in women with chronic hypertension

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*Introduction:* Chronic maternal hypertension is associated with a 3 to 5-fold increased risk of preeclamspia. The compounding effect of additional risk factors on both preeclampsia risk and pregnancy outcome in such patients is uncertain.

*Objectives/hypothesis:* We hypothesised there may be additional risk factors identifiable in early pregnancy within this cohort which are associated with an increased risk of preeclampsia. If so, early risk stratification may help guide management and intervention to attenuate this risk.

*Methods:* Risk factors for preeclampsia identified at the pregnancy booking visit in women with known chronic hypertension were obtained from two centres in Melbourne, Australia in a retrospective analysis of 42,500 singleton deliveries(2008–2018). Risk factors included age, parity, previous preeclampsia, ethnicity, smoking, secondary hypertension, renal disease/proteinuria, hypertension duration, diabetes, antihypertensive use at conception and/or first trimester, aspirin use before 16 weeks, blood pressure(BP) at booking and body mass index(BMI). Associations were evaluated by univariate and multivariate logistic regression analysis, with significance $p < 0.05$.

*Results:* 233 births occurred in women with chronic hypertension (0.55% prevalence). Preeclampsia occurred in 36(15.5%) of these births, of which 19(8.2%) were severe preeclampsia. On univariate analysis, previous preeclampsia [OR 5.45(1.89–12.71)] and hypertension duration [OR 2.4(1.76–4.92)] were most strongly associated with any severity of preeclampsia. Adjusting for age, parity, previous preeclampsia, BMI, BP and renal disease, hypertension duration > 5 years remained an independent risk factor [OR 1.23(1.03–1.48)]. For severe preeclampsia, strongest associations were maternal age > 35, renal disease, BMI < 30 and previous preeclampsia, the last remaining significant after adjustment [OR 13.2(1.47–119.6)].

*Discussion:* Risk of preeclampsia of any severity and severe preeclampsia were most strongly associated with a duration of hypertension > 5 years and previous preeclampsia respectively. This highlights the importance of careful clinical appraisal in early pregnancy in women with chronic hypertension as early interventions (eg. aspirin) may mitigate risk of preeclampsia in this group.

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### 295. The characteristic of PE (preeclampsia) complication at lupus on pregnancy

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*Background:* Indonesia had the serious challenge of highly maternal mortality over last ten years reflecting the real national health problem. There was 305 maternal death/100.000 deliveries, where 3 major possible cause of PE, PPH and infection persisted. Recently the new comer of diseases was standing tightly behind them: lupus on pregnancy.

*Material & Method:* This was a retrospective study from medical records.. Fifty-two cases of Lupus from 4592 pregnancy during 4 years (1.13%) have been observed in DR. Soetomo Teaching Hospital (tertiary hospital) Surabaya, Indonesia from January 2013 through December 2016.

*Results:* Sixteen cases of lupus were complicated by PE (30.7%), and 37.5% cases with Lupus Nephritis (that mostly showing increased serum creatinin level > 1.4 mg%). The maternal age were 25–34 years old (62.5%) and 62.5% were multigravida. Almost half cases (43.75%) got flare, leading to 25% early termination, while the remaining casesed (75%) were conservatively managed until 34 weeks gestation. Fetal outcome reported as 11 cases (68.75%) having birthweight > 2 kg, with 37.5% asphyxia (low apgar score).

*Discussion:* Pregnancy was discouraged in women affected by SLE, due to the disease becoming more aggresive during pregnancy and a poor pregnancy outcome was frequently reported. During pregnancy, the maternal immune system adapts to allow the growth of a semi-allogenic fetus. Significant immunological changes occur including suppression of type-2 helper cells (Th2), but the upregulation of Th1 cytokines in pregnancy may increase the risk for Th1-mediated diseases.

The aboved concept was reflected at our study where most cases were sucessfully managed conservative until 34 weeks gestation and majority baby born with birthweight > 2 kg.

*Conclusions:* Our results suggest that lupus women are much more likely to develop worsening maternal spesifically preeclampsia and fetal outcomes when they become pregnant.

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### 303. Demographic and clinical profiles of women with hypertensive disorders in pregnancy (HDPs) across tertiary health facilities in Nigeria

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*Introduction:* HDPs are the leading cause of maternal mortality in referral facilities in Nigeria. Understanding who the women with HDPs are is important for designing a more inclusive and responsive health system intervention.

*Objectives:* To understand the demographic and clinical profiles of pregnant women with hypertensive disorders in Nigeria.

*Methods:* A prospective cohort study of women with HDPs. Enrollment occurs within 24 h of delivery which started in August 2017 with 1-year follow-up to measure maternal and infant outcomes associated with HDPs. The study collects clinical and demographic data at enrollment, 9 weeks, 6 months and 1 year using a pre-tested, interviewer-administered questionnaire across 7 tertiary hospitals in Nigeria with 404 enrolled women as at March 2018. Preliminary data provides a snapshot of who the women with HDPs in Nigeria are, and may provide insight to inform future health system.

*Results:* Seventeen percent of HDPs are occurring in maternal age deemed to be high-risk (13% and 4% are younger than 18 and older than 35 respectively). Twenty percent are first time pregnancies and 24% are para $\geqslant 4$. Among those with records of gestational age at booking (239), only 9.2% booked within the first trimester. Thirty-five percent were unbooked. 7.9%, 32.5%, 46.8% and 12.7% were admitted with chronic hypertension, gestational hypertension, pre-eclampsia and eclampsia respectively. Seventy percent of HDPs were late-onset.

*Discussion:* HDPs are compounded by other high-risk maternal behaviors and demographics. This calls for risks reduction and care-seeking improvement programs within our communities. This snapshot may provide insight to inform future health system intervention.

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### 304. Obstetric hemolytic uremic syndrome (P-AHUS): prognostic markers

**Tatyana Kirsanova [a], Alina Kolyvanova [b], Maria Vinogradova [b], Tatyana Fedorova [b] ([a] Federal State Budget Institution, Russian Federation, [b] Russian Federation)**

Pregnancy carries a high risk for various forms of thrombotic microangiopathy(TMA), including thrombotic thrombocytopenic purpura and P-aHUS. Preeclampsia (PE) and HELLP might be a trigger of P-aHUS.

*Objectives:* To describe the subpopulation of P-aHUS patients, to search clinical and anamnestic prognostic markers of the course of the disease.

*Methods:* The throughout analysis of 36 cases of p-aHUS. The median age of patients was 30 years (25–33). All patients received plasma therapy (30–40 ml/kg), in 13 cases Eculizumab was administered. The patients were divided into two groups: Gr.1 have consisted of patients surviving the episode of TMA (n = 25, Md 30 years (25–34)), gr.2- those who did not (n = 11, Md 35 years (32–44)). Groups were compared using following criteria: age, amount of pregnancies and deliveries in anamnesis, gestational complications in previous pregnancies, volume of surgical treatment, treatment with antibiotics, antithrombotic therapy, organ lesions, laboratory markers.

*Results:* Gr.2 had a greater number of previous pregnancies and births (3 pregnancies (2.25, 4), P = 0.03, 2 (2, 3) births, P = 0.03), a greater frequency of surgical interventions (including caesarian section) in a larger volume than the cesarean section (30.6% gr1, 63.6% gr2, P = 0.01) and greater frequency of previous PE/HELLP. Gr2 had a higher rate of developing acute heart failure (27.3% vs 4%, p = 0,1), respiratory distress syndrome (90.9% vs 60,0%, p = 0.01), acute cerebrovascular events ( in total and ischemic stroke, 27.3% vs 0%, p = 0.01). The superimposed sepsis was more frequently observed in the gr.2 (45.5% vs 0%, D = 0.01).

*Conclusions:* The revealed regularities allow us to assume the presence of the following triggers for the development of p-aHUS: surgical interventions and gestational complications. Apparently, TMA in the group of the dead was heavier and more pronounced, it was more often complicated by the septic process. Further development of protocols for antibiotic therapy is necessary.

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### 306. HELLP-syndrome a stair to atypical hemolytic uremic syndrome (aHUS)

**Tatyana Kirsanova [a], Maria Vinogradova [b], Alina Kolyvanova [b], Tatyana Fedorova [b] ([a] Federal State Budget Institution, Russian Federation, [b] Russian Federation)**

*Introduction Aims:* To assess and compare the severity of hematological, renal and liver manifestation, the blood PLGF and sFlt1 levels in patinets with HELLP-syndrome, PE and aHUS, and evaluate the association markers with the severity of clinical manifestations.

*Methods:* Women with PE (Gr1),HELLP (Gr2), P-aHUS (Gr3), PE and with normal pregnancies were recruited for the retrospective study from September 1, 2013 to December 31,2017.

*Results:* Gr3 had a poor outcome and most severe course.

*Conclusions:* Based on clinical findings in P-aHUS, we propose a similar mechanism for a pathogenetic role of complement in HELLP. PE is only trigger or complement-activating condition for development HELLP-syndrome. Depending on the triggering stimuli and vascular bed involved, aHUS or the HELLP syndrome may develop. There were more severe clinical manifestations of renal impairment in all pts with HELLP and PaHUS as compared to women with PE and control gr. The sFlt-1 level was significantly higher in pts with PE as compared with HELLP and HELLP-onset aHUS. Less increased ratio of sFlt-1/ PlGF in gr.1 may confirm that PE is only complement amplifying factor to HELLP-development.

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### 307. Echocardiographic assessment of left ventricular systolic function in preeclampisa complicated by pulmonary oedema

**Eduard Langenegger, Bradley Griffiths (University Stellenbosch, Cape Town, South Africa)**

*Introduction:* Acute pulmonary oedema remains a life threatening complication of pre-eclampsia. The systolic left ventricular function in patients with pre-eclampsia and pulmonary oedema is not clear.