zones of these placentas were smaller when compared to Nrf2+/+-ones.

Conclusions: Our results indicated that deficiency in Nrf2 signaling may reduce the placental functions, increase the levels of oxidative stress, which may negatively affect the nutrient transfer capacity to meet fetal growth demands.

Disclosures: N. Kweider: None. J. Lambertz: None. T. Pufe: None. C.J. Wruck: None. W. Rath: None.

[126-POS]

Inter-pregnancy weight change and pregnancy hypertension
Doris M. Campbell, Sohinee Bhattacharya, Graham Horgan, Jacqueline Wallace (University of Aberdeen, Aberdeen, United Kingdom)

Objectives: To determine the relationship between inter-pregnancy weight change and the primary incidence or recurrence of gestational hypertension and preeclampsia in the second pregnancy; and whether it is influenced by the initial BMI.

Methods: The study population was women who had their first and second consecutive births at Aberdeen from 1986 to 2007, who booked before 24 weeks gestation on both occasions and whose height and weight were measured. 12,740 women were included. Maternal weight was adjusted to take into account gestation at booking. The corrected weight was used to determine BMI for both pregnancies. Inter-pregnancy change in BMI was then calculated, and the association between inter-pregnancy BMI change and hypertensive disorders determined using logistic regression.

Results: BMI increased from 24.5 at first pregnancy to 25.5 at the second over an average interval of 3.4 years. Women who were overweight at baseline and who had a modest or large gain in BMI between pregnancies had an increased risk of primary preeclampsia compared to those whose BMI was stable.

[adjusted odds ratio (OR) and 95% confidence limits, 2.29 (1.06–4.95) and 3.03 (1.38–6.64), respectively]. This did not hold for those who were normal weight at baseline. Weight loss of >2BMI units was protective against recurrent preeclampsia whereas a gain of >2BMI units led to an increased risk of recurring gestational hypertension. The latter was true for all women irrespective of baseline BMI.

Conclusions: Inter pregnancy weight change variously impacts pregnancy hypertension, but what advice to give women should also consider the impact on other complications eg. IUGR or preterm delivery.

Disclosures: D.M. Campbell: None. S. Bhattacharya: None. G. Horgan: None. J. Wallace: None.

[127-POS]

Educational level and maternal long-term risk of cardiovascular mortality by number of births
Frode Halland [a], Lisa deRoo [b], Nils-Halvdan Morken [a], Kari Klungsøyr [c], Allen J. Wilcox [d], Rolv Skjærven [c] ([a] University of Bergen, Haukeland University Hospital, Bergen, Norway, [b] University of Bergen, Bergen, Norway, [c] University of Bergen, Institute of Public Health, Bergen, Norway, [d] NIEHS/NIH, Durham, NC, USA)

Objectives: To assess the association between number of births and long-term maternal total and cardiovascular mortality stratified on education.

Methods: A population-based cohort study. Setting: Medical Birth Registry of Norway.

Participants: Mothers with births registered in the Medical Birth Registry of Norway during the period 1967–2009. Mothers with first birth before 1991 were included. The data was organized in maternally linked sibling files. Cox proportional hazard models were used.

Main Outcome Measures: Hazard ratios of maternal total and cardiovascular mortality, at 40–69 years, by number of births stratified on education (ten or less years and more than ten years of education).

Results: We found a J-shaped association between total mortality and cardiovascular mortality with increasing number of births among women with ten or less years of education, while there was no significant association among women with more than ten years of education. Compared to mothers with more than ten years of education and two births, the adjusted hazard ratio of cardiovascular death among those with five or more births and same education was 1.12 (95% confidence intervals (CI) 0.74–1.69). The corresponding hazard ratio among those with ten or less years of education was 3.57 (3.05–4.19). Mothers with only one birth had increased risk of both cardiovascular and total mortality, independent of educational level.

Conclusions: Our results suggest that the association between increasing number of births and later life cardiovascular mortality is explained by factors associated with educational level and not by adverse physiological changes accumulating over repeated pregnancies. The increased mortality among mothers with only one birth point toward underlying physiological factors associated with subfertility and/or chronic disease.

Disclosures: F. Halland: None. L. deRoo: None. N. Morken: None. K. Klungsøyr: None. A.J. Wilcox: None. R. Skjærven: None.

[128-POS]

Curcumin decreased level of pro-inflammatory cytokines in monocyte cultures exposed to preeclamptic plasma by affecting the transcription factors NF-kB and PPAR-γ
Bambang Rahardjo (University of Brawijaya, Malang, Indonesia)

Objectives: The purpose of the study is to determine the role of curcumin in the alteration levels of IL-1α, IL-6, and TNF-α as pro-inflammatory cytokines in monocyte culture exposed to preeclamptic plasma, as well as the effect to the transcription factors; NF-kB and PPAR-γ.

Methods: Plasma was taken from preeclamptic women ($n = 12$) and normotensive pregnant women ($n = 12$). Monocyte cultures were taken from non-pregnant healthy woman. Monocyte cultures were incubated with plasma for 48 h. Curcumin in various doses were given in monocytes culture before and after preeclamptic plasma exposure. The level of IL-1α, IL-6, and TNF-α as well as NF-kB and PPAR-γ in each culture were determined by ELISA procedures. The final data was analyzed by ANOVA and PATH Analysis.

Results: This study shows a significant increase (*p*-value <0.05) in the levels of pro-inflammatory cytokines (IL-1α, IL-6, and TNFα) in monocyte cultures exposed to preeclamptic plasma compared with normotensive pregnancy plasma. Curcumin treatment in various doses could decrease significantly (*p*-value<0.05) pro-inflammatory cytokines levels in monocyte cultures that has been already stimulated by preeclamptic plasma. After curcumin treatment, there was decreased level of nuclear NF-kB p50 and increased level of PPAR-γ significantly. Curcumin have direct effect to decreasing level of nuclear NF-kB p50 and also curcumin indirectly influenced to the level of nuclear NF-kB p50 by the increased level of PPAR-γ.

Conclusions: Curcumin could decrease levels of pro-inflammatory cytokines (IL-1α, IL-6, and TNFα) in monocytes culture exposed to plasma preeclamptic by affecting transcription factors NF-kB and PPAR-γ. Curcumin has potential advantage in the prevention and future treatment of preeclampsia, through inflammation pathway assumed as responsible pattern to the development of preeclampsia.

Disclosure: B. Rahardjo: None.

[129-POS]

Risk factors for cesarean section in women with severe preeclampsia

Leila Katz, Melania Mr Amorim, Alex Souza Sr., Sabina B. Maia, Antonio H. França Neto, Nicole V. Leal, Anibal Faundes (IMIP, Recife, Brazil)

Objectives: To determine risk factors for cesarean section in women with severe preeclampsia.

Methods: A prospective cohort study was conducted including women with severe preeclampsia treated at IMIP, Northeast of Brazil, from August 2009 to December 2010. Exclusion criteria were eclampsia, hemorrhagic emergencies, coma and other clinical conditions associated. Statistical analysis included determination of Risk Ratio and multiple logistic regression to determine the adjusted risk of cesarean section after controlling potential confounders.

Results: A total of 500 women with severe preeclampsia were included. Labor was spontaneous in 110 patients (22%) and induced in 141 (28.2%), 95 of whom went on to have vaginal deliveries (67.4%). The total Cesarean section rate was 68%; with 249 patients (50%) having elective and 92 (18.4%) intrapartum Cesarean sections. The Cesarean section rate following spontaneous labor was 42% The indications for cesarean were: severe preeclampsia (57%), chronic fetal distress (15%), breech presentation (5.6%), dystocias and/or cephalopelvic disproportion (6%), nonreassuring fetal heart rate (4.4%), macrosomia (4%) and having had two or more previous Cesarean sections (3.5%) When multiple logistic regression was performed, the main risk factors associated with cesarean section were hypertension without control during pregnancy (OR = 4.86; 95% CI = 1.30–20.42) and birthing from 7:00am to 10:00pm (OR = 6.52; 95% CI = 1.98–29.8). Labor induction (OR = 0.02; 95% CI = 0.01–0.16) and spontaneous labor (OR = 0.002; 95% CI = 0.0001–0.016) were associated with reduced risk of cesarean section. There was no association between cesarean section and maternal age, parity, gestational age, clinical presentation of preeclampsia, HELLP syndrome and proteinuria.

Conclusions: Cesarean section is frequently performed in patients with severe preeclampsia but real indications remain unclear. Labor induction is associated with a reasonable rate of success and should be tried in more cases.

Disclosures: L. Katz: None. M.M. Amorim: None. A.S. Souza: None. S.B. Maia: None. A.H. França Neto: None. N.V. Leal: None. A. Faundes: None.

[130-POS]

Placental abruption and long-term maternal cardiovascular disease mortality: A population-based registry study in Norway and Sweden

Lisa A. DeRoo [a], Rolv Skjaerven [a], Allen J. Wilcox [b], Kari Klungsoyr [a], Anna-Karin Wikstrom [c], Nils-Halvdan Morken [a], Sven Cnattingius [c] ([a] University of Bergen, Bergen, Norway, [b] National Institute of Environmental Health Sciences, Research Triangle Park, NC, USA, [c] Karolinska Institute, Stockholm, Sweden)

Objectives: Women with preeclamptic pregnancies have increased risk of long-term cardiovascular mortality. We explored this mortality risk among women with placental abruption, another placental pathology.

Methods: We used linked Medical Birth Registry and Death Registry data to study cardiovascular disease mortality among women with a first singleton birth between 1967 and 2002 in Norway and 1973 and 2003 in Sweden. Cox regression analysis was used to estimate associations between placental abruption and cardiovascular disease death adjusting for maternal age, education, year of the pregnancy and country.

Results: After an average follow-up of 23 years, 5453 women had died from cardiovascular disease out of a total