A344 THE EFFECT OF MAGNESIUM SULPHATE ON THE CARDIOVASCULAR AND CEREBROVASCULAR RESPONSES TO PROFOUND ASPHYXIA IN PRETERM FETAL SHEEP
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Background: In preterm infants and adults, MgSO4 (commonly used for the treatment of preeclampsia and recently associated with perinatal neuroprotection) has been associated with hypotension. However, the effect of MgSO4, on the preterm fetal cardiovascular and cerebrovascular adaptations to asphyxia, a common cause of perinatal brain injury, is poorly understood.

Method: At 0.7 of gestation, 16 fetal sheep (n = 7 control, 7 low dose and 2 high dose MgSO4) underwent 25 minutes of complete umbilical cord occlusion. Mean arterial pressure (MAP), fetal heart rate (FHR), femoral and carotid blood flows (FFB and CaBF, respectively) were measured continuously.

Results: Fetal plasma magnesium levels were increased by −15% and 60% after low and high dose MgSO4, infusion, respectively. During the first 12 min of occlusion, low dose MgSO4, was associated with improved fetal MAP (P < 0.05 vs control), and a greater reduction in FBF and femoral vascular conductance. MAP was higher during the final 5 minutes of asphyxia in both MgSO4, groups (P < 0.05 MgSO4, low dose vs. control).

Conclusions: A 15% increase in total plasma magnesium was associated with improved maintenance of MAP during complete umbilical cord occlusion. This was partially mediated by improved peripheral vasocostriction. Maternal MgSO4, treatment did not impair the cardiovascular and cerebrovascular response to asphyxia of preterm fetal sheep.

A100 DOES DHA SUPPLEMENTATION DURING PREGNANCY IMPROVE CHILDREN’S LANGUAGE DEVELOPMENT? A 4-YEAR FOLLOW-UP OF A DOUBLE-BLIND, MULTICENTER, RANDOMIZED CONTROLLED TRIAL
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Background: Pregnancy is an important period during which the n–3 fatty acid docosahexaenoic acid (DHA) can affect development of the infant brain. The objective of this study was to determine whether increasing maternal DHA intake during the last half of pregnancy would enhance the language development of their children at 4 years.

Method: This is a follow-up study of 726 children whose mothers were randomly allocated to take DHA-rich fish oil capsules (providing 800 mg/d of DHA) or control capsules from 20 weeks’ gestation until delivery. Language development was assessed at 4 years of age using 3 subtests (Sentence Structure, SS; Word Structure, WS; Expressive Vocabulary, EV) from the Clinical Evaluation of Language Fundamentals Preschool, Second Edition (CELF-P-2) to obtain a Core Language Score (CLS). Analyses were performed according to the intention-to-treat principle.

Results: 557 (76%) completed the CELF-P-2. CSL did not differ significantly between the DHA and control groups (adjusted mean difference, AMD, −0.91; 95% CI, −2.84 to 1.03; P = 0.36) and there was no significant treatment x sex interaction (P = 0.07). SS (AMD, −0.22; 95% CI, −0.60 to 0.16; P = 0.25), WS (AMD, −0.15; 95% CI, −0.55 to 0.25; P = 0.45) and EV (AMD, −0.23; 95% CI, −0.59 to 0.14; P = 0.22) scores did not differ significantly between groups. Girls from the DHA group had lower WS scores than girls from the control group (AMD, −0.64; 95% CI, −1.18 to −0.09; P = 0.02).

Conclusions: DHA supplementation during pregnancy is unlikely to result in major benefits to the language development of young children.

A378 MATERNAL HEALTH AND PREGNANCY OUTCOMES AMONG WOMEN OF REFUGEE BACKGROUND FROM AFRICAN COUNTRIES
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Background: It is unclear whether refugee groups have poorer maternal health and pregnancy outcomes compared to non-refugee migrant groups or whether specific refugee groups have particularly poor outcomes. This study aimed to describe maternal health, pregnancy care attendance and pregnancy outcomes among women of refugee background from African countries compared to non-refugee migrant women.

Method: Retrospective, observational study of singleton births, at the largest maternity service in Victoria, Australia 2002–2011, to women born in humanitarian source countries (HSC) and non-HSC from North Africa (n = 1361), Middle and East Africa (n = 706) and West Africa (n = 106).

Results: Compared to non-HSC groups, risk factors related to social disadvantage were generally more common across the HSC groups: inter-pret need (13–56%), multiparity (69–80%), age <20 years (2–13%) and living in relatively socio-economic disadvantaged areas (53–78%). Vitamin D insufficiency was generally more common among the HSC groups (23–32%) as was female genital mutilation (5–14%). Birth before arrival (3.6%) was particularly high in the North African HSC group. HSC-birth was independently associated with gestational diabetes (OR = 3.5 95% CI: 1.8–7.1) among women from Middle and East Africa. The West African HSC group had the highest stillbirth incidence (4.4%).

Conclusions: Resettled refugees from different African regions may be at higher risk of specific adverse pregnancy outcomes compared to non-refugee migrant women. Awareness of differing risks and health needs would assist provision of appropriate care to improve the health of women of refugee background and their babies.

A392 MATERNAL HEALTH AND PREGNANCY OUTCOMES AMONG WOMEN OF REFUGEE BACKGROUND FROM ASIAN COUNTRIES
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Background: Many refugees from Afghanistan, Bhutan, Burma and Iraq have resettled in Australia, however little is known about pregnancy outcomes in these populations. This study aimed to describe maternal health, pregnancy care attendance and pregnancy outcomes among women of refugee background from these countries, compared to non-refugee migrant women.

Method: Retrospective, observational study of singleton births, at the largest maternity service in Victoria, Australia 2002–2011, to women born