**MATERNAL ENERGY ADJUSTED DIETARY INFLAMMATORY INDEX AND MATERNAL CARDIOMETABOLIC FACTORS IN PREGNANCY. FINDINGS FROM THE ROLO STUDY**

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**Background:**

Excessive inflammation during pregnancy has been linked to adverse pregnancy outcomes. Energy adjusted Dietary Inflammatory Index (E-DII) is a method of assessing the inflammatory potential of the diet. This analysis investigated if maternal E-DII during pregnancy is associated with maternal cardiometabolic factors in early and late pregnancy.

**Methods:**

This is secondary analysis of data from the ROLO (Randomised cOntrol trial of LOw glycaemic index diet in pregnancy) study (n=759). Scores for maternal E-DII were calculated for trimesters 1, 2 and 3 from 3-day food diaries (n=518). Weight and height were obtained at booking and body mass index (BMI) was calculated (kg/m2). Blood pressure (BP), fasting lipid profiles, glucose levels and HOMA1-IR were obtained at booking (12-14 weeks) and in late pregnancy (34 weeks). Multiple linear regression was used to examine associations between E-DII in trimester 1 and early and late cardiometabolic markers and E-DII in trimester 3 and late cardiometabolic factors. All analyses were adjusted for potential confounders.

**Results:**

In adjusted analysis, maternal E-DII in trimester 1 was positively associated with maternal BMI (B=0.476, p=0.001) early and late total cholesterol (B=0.155, p=0.001; B=0.127, p=0.012), early triglycerides (B=0.043, p=0.028), early and late LDL (B=0.126, p=0.002; B=0.110, p=0.031), late glucose (B=0.036, p=0.033) and early diastolic BP (B=0.538, p=0.024). A positive association

was observed between E-DII in trimester 3 and late diastolic BP (B=0.624, p=0.019).

**Conclusion:**

A diet low in pro-inflammatory foods during pregnancy may be of benefit to maternal cardiometabolic health. However, incorporating this advice into practice needs further exploration.

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