

# Hubungan status nutrisi maternal terhadap risiko kardiovaskular pada bayi baru lahir : perhatian khusus pada ketebalan tunika intima-media aorta abdominalis = Correlation between maternal nutritional status and cardiovascular risks in the newborns particularly aortic intima media thickness

Annisa Nur Aini, author

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## Abstrak

**ABSTRAK**  
Latar belakang: Deteksi dini aterogenesis diperlukan untuk mencari faktor risiko gangguan kardiovaskular pada neonatus. Tujuan: 1 mengetahui sebaran nilai ketebalan tunika-intima aorta abdominalis aIMT pada bayi baru lahir; 2 mengetahui hubungan antara status nutrisi maternal dan berat lahir bayi terhadap aIMT bayi baru lahir. Metode: Penelitian potong lintang pada 86 bayi usi 2-3 kali nilai aIMT menggunakan ultrasonografi vaskular bertransduser linear 13 MHz dengan piranti lunak otomatis, kemudian diambil nilai reratanya. Rerata aIMT kemudian dihubungkan dengan indeks massa tubuh ibu trimester pertama kehamilan dan berat lahir. Hasil: Rerata aIMT bayi baru lahir di Unit Perinatologi RSCM adalah 0,621 mm 0,110 mm. Tidak ditemukan korelasi antara indeks massa tubuh ibu trimester pertama kehamilan dengan aIMT bayi  $r = 0,137$ ,  $p = 0,207$ . Tidak ditemukan korelasi antara berat lahir bayi dengan aIMT bayi  $r = 0,036$ ,  $p = 0,742$ . Simpulan: Rerata aIMT bayi baru lahir di Unit Perinatologi RSCM adalah 0,621 mm 0,110 mm. Tidak didapatkan korelasi antara indeks massa tubuh ibu maupun berat lahir bayi terhadap aIMT bayi baru lahir. Deteksi dini risiko kardiovaskular pada neonatus melalui aIMT belum perlu dilakukan dalam praktik sehari-hari. Kata kunci: nutrisi maternal, risiko kardiovaskular, ketebalan tunika intima-media aorta

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## **ABSTRACT**

Background Early detection of atherogenesis is needed to evaluate cardiovascular risk factors in newborns. Aim 1 knowing aortic intima media thickness aIMT distribution value in newborns 2 evaluate correlation between maternal nutritional status and birth weight to newborn aIMT. Method A cross sectional study was performed in 86 newborns, aged 0 7 days, with median gestational age of 35 weeks. All aIMT subjects were measured using a 13 MHz linear transducer vascular ultrasound with automatic software. Mean aIMT then correlated with first trimester maternal body mass index and birth weight. Results Newborn mean aIMT in Perinatology division Cipto Mangunkusumo Hospital was 0,621 mm SD 0,110 mm. There was no significant correlation between first trimester maternal body mass index and newborns aIMT  $r = 0,137$ ,  $p = 0,207$ . There was no significant correlation between birth weight and newborns aIMT  $r = 0,036$ ,  $p = 0,742$ . Conclusions Newborn mean aIMT in Perinatology division Cipto Mangunkusumo Hospital was 0,621 mm SD 0,110 mm. There were no correlations between first trimester maternal body mass index and birth weight to newborns aIMT. Early detection of atherogenesis in newborns through aIMT measurement were not recommended for daily practice yet. Keywords Maternal nutrition, newborns cardiovascular risks, aortic intima media thickness