

# Gambaran kadar gula darah diawal kelahiran pada bayi late preterm dan cukup bulan kecil masa kehamilan dan hubungannya dengan keton darah sebagai respons adaptasi metabolik = Early metabolic adaptation in late preterm and small for gestational age infants pattern of blood glucose and ketone / Desiana Nurhayati

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## Abstrak

[<b>ABSTRAK</b><br>

Latar Belakang: Hipoglikemia merupakan masalah metabolik yang sering terjadi pada neonatus terutama bayi kurang bulan dan bayi kecil masa kehamilan. Sebagian besar neonatus kompensasi hipoglikemia fisiologis dengan memproduksi benda keton.

Tujuan: Membantu menambahkan data dalam membuat pedoman pemeriksaan glukosa darah pada bayi late preterm dan bayi cukup bulan kecil masa kehamilan.

Metode Penelitian: Penelitian cross sectional untuk melihat gambaran kadar gula darah diawal kelahiran pada bayi late preterm dan cukup bulan kecil masa kehamilan dan hubungannya dengan keton darah sebagai respons adaptasi metabolik. Penilaian respons kadar keton darah terhadap perubahan kadar gula darah dengan melakukan uji korelasi pada masing-masing tahap penilaian.

Hasil: Sebanyak 53 subyek memenuhi kriteria penelitian. Rerata kadar gula darah pada usia 0-4 jam  $69,83 \pm 22,19$  mg/dL, >4-24 jam  $63,02 \pm 16,80$  mg/dL, >24-48 jam  $62,94 \pm 14,80$  mg/dL ) keseluruhan secara statistik tidak berbeda bermakna ( $p = 0,117$ ). Median kadar keton darah pada usia 0-4 jam 0,60 (0,10-1,40) mmol/L, >4-24 jam 0,60 (0,30-1,3) mmol/L, >24-48 jam 0,60 (0,10-1,40) mmol/L keseluruhan secara statistik tidak berbeda bermakna ( $p = 0,326$ ). Hubungan antara perubahan kadar gula darah dengan perubahan kadar keton darah menunjukkan bahwa setiap perubahan satu unit kadar gula darah mengakibatkan perubahan kadar keton darah sebesar 0,0012 secara statistik tidak bermakna ( $p = 0,192$ ).

Simpulan: Pola perubahan glukosa darah bayi late preterm dan bayi cukup bulan kecil masa kehamilan tidak selalu mengalami hipoglikemia, produksi badan keton pada bayi late preterm dan bayi cukup bulan kecil masa kehamilan memadai.

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<b>ABSTRACT</b><br>

Introduction: Hypoglycaemia is the most common manifestation of failure of metabolic adaptation in the newborn period, especially in premature infants and small for gestational age. Most of the physiological neonatal hypoglycaemia compensate physiologist hypoglycaemia by producing ketone body.

Objective: Provide data to establish guidelines blood glucose tests in late preterm infants and term infants small for gestational age.

Methods: A cross sectional research to see pattern of blood glucose concentration at the newborn and its relationship with blood ketones as a response to metabolic adaptation. Evaluation of blood ketone concentration to the change of blood glucose is done by correlation test at each evaluation stage.

Results: A total of 53 subjects fulfil the study criteria. The mean blood glucose level at the age of 0-4 hours was  $69,83 \pm 22,19$  mg/dL, > 4-24 hours was  $63,02 \pm 16,80$  mg/dL, > 24-48 hours was  $62,94 \pm 14,80$  mg/dL

overall was not statistically significant ( $p = 0.117$ ). Median levels of blood ketones at the age of 0-4 hours was 0.60 (0.10 to 1.40) mmol/L, > 4-24 hours was 0.60 (0.30 to 1.30) mmol/L, > 24-48 hours was 0.60 (0.10 to 1.40) mmol/L overall was not statistically significant ( $p = 0.833$ ). The relationship between changes in blood glucose levels by changing levels of blood ketones indicate that any change in one unit of blood glucose levels lead to changes in levels of blood ketones at 0.0012 was not statistically significant ( $p = 0.192$ ).

Conclusion: The change of blood glucose in late preterm infants and term infants small for gestational age not always having hypoglycemia. Production of ketone body at late preterm infants and term infants small for gestational age is not sufficient., Introduction: Hypoglycaemia is the most common manifestation of failure of metabolic adaptation in the newborn period, especially in premature infants and small for gestational age. Most of the physiological neonatal hypoglycaemia compensate physiologist hypoglycaemia by producing ketone body.

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