

# Hubungan kadar vitamin d dengan kejadian sepsis neonatal awitan dini pada neonatus kurang bulan = The association between vitamin d levels with early onset neonatal sepsis in preterm infants

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## Abstrak

**Latar Belakang.** Sepsis neonatal awitan dini SNAD masih merupakan masalah di Indonesia. Vitamin D memiliki efek pada fungsi imunitas. Neonatus kurang bulan NKB berisiko mengalami defisiensi kadar vitamin D. Hubungan kadar vitamin D dengan kejadian SNAD pada NKB belum jelas.

**Tujuan.** Menganalisis hubungan kadar vitamin D dengan kejadian SNAD pada NKB.

**Metode.** Duapuluhan NKB dengan klinis dan pemeriksaan laboratorium menyokong SNAD kelompok kasus dan 20 NKB tanpa hasil laboratorium SNAD kelompok kontrol ikut dalam penelitian ini. Subjek penelitian adalah NKB usia gestasi ge; 28 sampai dengan < 37 minggu dirawat di RSUPN Cipto Mangunkusumo selama bulan Juli - September 2017. Pemeriksaan kadar vitamin D 25 OH D dengan metode competitive chemiluminescence immunoassay CLIA direk dengan alat Diasorin Liaison.

**Hasil.** Median kadar vitamin D pada NKB dengan SNAD 8,95 4,10 - 16,30 ng/mL dengan rerata usia gestasi 33,25 1,71 minggu dan rerata berat lahir 1863,75 415,06 gram. Median kadar vitamin D tanpa SNAD 11,75 5,80 - 42,80 ng/mL dengan rerata usia gestasi 34,67 1,53 minggu dan rerata berat lahir 2125,0 340,55 gram. Median kadar vitamin D NKB SNAD lebih rendah secara bermakna dibandingkan NKB tanpa SNAD.

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**Background.** Early onset neonatal sepsis EONS is still a problem in Indonesia. Vitamin D has effect on immune function. Preterm infants have a risk of deficiency of vitamin D levels. The association between vitamin D levels with EONS were unclear.

**Objective.** To determine the association between vitamin D levels with EONS in preterm infants.

**Methods.** Twenty preterm infants with clinical and laboratory finding of EONS study group and 20 preterm infants with no signs of laboratory infection control group were enrolled this study. The subjects were preterm infants of gestational age ge 28 37 weeks in Cipto Mangunkusumo Hospital during July September 2017. Vitamin D 25 OH D levels were measured using Diasorin Liason with competitive chemilunescence immunoassay CLIA technique.

**Results.** Median vitamin D levels with EONS was 8,95 4,10 16,30 ng mL, mean of gestational age and birth weight were 33,25 1,71 weeks and 1863,75 415,06 g, respectively. Median vitamin D levels without EONS was 11,75 5,80 42,80 ng mL, mean of gestational age and birth weight were 34,67 1,53 weeks and 2125,0 340,55 g, respectively. Median vitamin D levels of preterm infants with EONS was significantly lower than without EONS. **Conclusion.** Vitamin D levels are associated with EONS in preterm infants.