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Pengaruh Pemberian Bifidobacterium Animalis Lactis Hno 19 (Dr10) Pada Ibu Hamil Dan Menyusui Terhadap Kandungan Dr10, Il-8 Dalam Asi Dan Integritas Mukosa Usus Bayi = The Effect of Bifidobacterium animalis lactis HNO19 (DR10) Supplementation in Women During Pregnancy and Lactation on Breast Milk DR10, IL-8 and Infant's Gut Mucosal Integrity

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Abstrak

Pertumbuhan mukosa usus manusia belum sempurna saat dilahirkan, karena itu usus bayi sering dikatakan sebagai leaky gut. Probiotik diketahui dapat membantu maturasi saluran cerna. Apakah dalam ASI memang terdapat probiotik ataukah suatu kontaminasi, masih diperdebatkan.
Penelitian ini bertujuan untuk mengetahui apakah probotik ada dalam ASI bila diberikan suplementasi probiotik pada ibu hamil sejak trimester III dan menyusui, efek terhadap probiotik lain dan IL-8 dalam ASI, IFABP urin dan alfa-1-antitripsin (AAT) serta kalprotektin tinja, saat bayi lahir dan usia tiga bulan, dalam rangka menilai integritas mukosa usus.
Dilakukan penelitian uji klinis, paralel dua kelompok dengan randomisasi, samar ganda yang dilakukan di RS Budi Kemuliaan dan klinik-klinik satelitnya sejak Desember 2014 sampai dengan Desember 2015. Jumlah subjek 35 per kelompok. Digunakan probiotik
Bifidobacterium animalis lactis HNO19 karena bukan merupakan resident bacteria.
Lima subjek positif DR10 dalam kolostrum (V0) dan 7 subjek positif saat bayi usia 3 bulan (V3) pada kelompok probiotik. Hasil negatif didapati pada kelompok plasebo. Apusan kulit sekitar payudara negatif pada kedua kelompok. Nilai median IL-8 kelompok probiotik dibanding kelompok plasebo pada V0 dan V3 berturut-turut 2810,1 pg/mL vs. 1516,4 pg/mL (p = 0,327) dan 173,2 pg/mL vs. 132,7 pg/mL (p = 0,211). IFABP V0 dan V3 211,7 ng/mL vs. 842,5 ng/mL (p = 0,243) dan 25,3 ng/mL vs. 25,1 ng/mL (p = 0,466). AAT 136,2 mg/dL vs. 148,1 mg/dL (p = 0,466) dan 24 mg/mL vs. 29,72 mg/mL (p = 0,545). Kalprotektin 746,8 ng/mL vs. 4645,2 ng/mL (p = 0,233) dan 378,6 ng/mL vs. 391,3 ng/mL (p = 0,888).
Probiotik DR10 yang diberikan pada ibu hamil sejak trimester III dapat ditemukan dalam kolostrum dan usia 3 bulan pada kelompok probiotik, dan bukan suatu kontaminasi .Tidak terdapat perbedaan bermakna terhadap probiotik lain, kadar IL-8 dalam ASI, IFABP urin, AAT dan kalprotektin tinja pada kelompok probiotik dibanding dengan kelompok plasebo.
.....Newborn infants have intestinal hyperpermeability because their gut mucosa is not fully mature yet. It is known that probiotics helps gut maturity. It remains unclear whether probiotics pass through breast milk or whether the positive cultures are the result of contamination. This study aimed to evaluate the effect of probiotic supplementation in pregnant and lactating mothers, with regards to probiotic presence and IL-8

concentration in breast milk, infant urine intestinal fatty acid binding protein (IFABP), as well as fecal ?-1 anti-trypsin (AAT) and calprotectin at birth (V0) and at infant 3

months of age (V3) .

This randomized, controlled trial was double-blind, two parallel groups, probiotic and placebo with 35 subjects in each group. The sudy was done at Budi Kemuliaan Hospital and it's satellite clinics from December 2014 until December 2015. We used Bifidobacterium animalis lactis HNO19 (commonly known as DR10) as the supplemental probiotic, as it is not a member of the normal flora.

Probiotik DR10 were found in colostrum at 5 subjects and 7 subjects in V3 breastmilk probiotics group, but none in placebo group. Skin swab of DR10 were negative in both group. Median breast milk IL-8 in probiotic group compare to placebo group at V0 and V3 respectively were 2810.1 pg/mL vs. 1516.4 pg/mL ($p = 0.327$) and 173.2 pg/mL vs. 132.7 pg/mL ($p = 0.211$). Infant urine IFABP 211.7 ng/mL vs. 842.5 ng/mL ($p = 0.243$) and 25.3 ng/mL vs. 25.1 ng/mL ($p = 0.466$). Infant stool AAT 136.2 mg/dL vs. 148.1 mg/dL ($p = 0.466$) and 24 mg/mL vs. 29.72 mg/mL ($p = 0.545$). Stool calprotectin 746.8 ng/mL vs. 4645.2 ng/mL ($p = 0.233$) and 378.6 ng/mL vs. 391.3 ng/mL ($p = 0.888$).

Probiotic DR10 were found in colostrum and 3 month-breast milk of women in the probiotic group, but no DR10 in placebo group. However, breast milk IL-8, the presence of other probiotics, and infant gut mucosal integrity were not significantly different between the two groups.