

Pengaruh suplementasi probiotik *Lactobacillus plantarum* IS-10506 terhadap respon imun anak usia di bawah dua tahun

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Abstrak

Pengaruh suplementasi probiotik *Lactobacillus plantarum* IS-10506 terhadap respon imun anak usia di bawah dua tahun. Diare masih merupakan masalah kesehatan masyarakat yang serius terutama di negara berkembang sebagai kontributor malnutrisi dan penyebab morbiditas serta mortalitas anak usia bawah lima tahun. Penggunaan antibiotika tidak efektif bahkan biasanya menyebabkan efek samping yang merugikan. Penelitian ini akan menggali manfaat bakteri indigenous *Lactobacillus plantarum* IS-10506 isolasi dari dadih susu fermentasi spontan asal Sumatra Barat. Penelitian ini dirancang sebagai pre post randomized double-blind placebo clinical trial. Dua puluh anak usia 1-2 tahun diberikan suplementasi dan dibagi atas dua perlakuan yaitu probiotik dan placebo. Dilaksanakan di Larangan, Cileduk, Tangerang Banten. Subyek diberikan suplementasi selama 90 hari dan setiap 30 hari dilakukan pemeriksaan fisik oleh seorang dokter umum. Terdapat kenaikan persentase subyek yang mengalami kenaikan sIgA, TGF- β 1 dan penurunan TNF- α : namun uji statistik chi square tidak menunjukkan signifikansi dan juga tidak ditemukan korelasi antara titer sIgA, TGF- β 1, TNF- α . Di sisi lain suplementasi probiotik tidak cukup signifikan untuk dapat menekan insiden diare. Kecilnya jumlah sample sangat mempengaruhi kesimpulan statistik yang didapat

.....Effect of probiotic *Lactobacillus plantarum* [S-10506 supplementation on children younger than two year immune response Diarrheal disease remains a serious public health problem in developing world~ is well known as a significant contributor to malnutrition and one of the major causes of the annual morbidity and mortality among under-five children in the developing world. The use of antibiotics had not been effective and often followed by serious side effect. We investigated the benefit of indigenous bacteria *Lactobacillus plantarum* IS-10506 isolated from dadih, spontaneous fermented milk from West Sumatra. This study was designed as pre post randomized double-blind placebo clinical trial. Twenty children 1 - 2 years old were supplemented and divided into 2 treatment, probiotic and placebo groups. This in Larangan, Cileduk~ Tangerang Banten province were recruited and involved in this study. They were supplemented for 90 days and every 30 days physically clinical examination by physician. There are an enhancement of presentation subject who get an increase titer of sIgA and TGF- β 1 and suppression of TNF- α but not significant and there are no correlation significant between titer sIgA, TGF- β 1 and TNF α . Supplementation probiotik is not enough to suppress the diarrhea incidents lower than placebo. Very little sample quantity influences the statistic conclusion.