

Pengaruh pemberian MPASI formula diperkaya zat besi terhadap kadar feritin serum, hemoglobin dan perkembangan kognitif bayi usia 6-8 bulan = Effect of iron fortified complimentary feeding formula on changes in serum feritin, hemoglobin level and cognitive development score in 6-8 month's old baby

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Abstrak

ABSTRAK

Tujuan penelitian ini adalah untuk mengetahui pengaruh pemberian MPASI formula diperkaya zat besi terhadap kadar feritin serum, hemoglobin dan perkembangan kognitif bayi usia 6-8 bulan. Penelitian ini merupakan uji klinik, membandingkan 38 subyek yang mendapat konseling dan MPASI formula dengan 38 subyek yang mendapat MPASI raeikan selama 90 hari. Sebanyak 76 subyek yang berasal dari posyandu-posyandu di dua lokasi kelurahan Karnpong Melayu, kecamatan Jatinegara, dibagi menjadi dua yaitu kelompok perlakuan (P) dan kontrol (K) dengan alokasi anak berdasarkan pembagian wilayah. Data subyek yang diambil meliputi usia, berat badan, panjang badan, lingkar kepala, asupan energi, protein, zat besi serta kadar feritin serum, hemoglobin, dan skor perkembangan kognitif. Pengukuran kadar feritin serum, hemoglobin dan skor perkembangan kognitif dilakukan sebelum dan sesudah perlakuan. Analisis data dilakukan dengan uji t berpasangan dan t tidak berpasangan serta uji non parametrik dengan batas kemaknaan 5%. Sebanyak 38 subyek pada kelompok P dan K telah mengikuti penelitian secara lengkap. Satu subyek pada masing-masing kelompok dikeluarkan karena salcit yang dapat mempengaruhi hasil penelitian. Data awal menunjukkan keadaan yang sama antara kelompok P dan K. Penurunan kadar feritin serum, peningkatan kadar hemoglobin dan peningkatan skor perkembangan kognitif tidak bermakna secara statistik pada kedua kelompok ($p > 0,05$). Penurunan kadar feritin serum pada kelompok K lebih besar daripada kelompok P dan penurunannya bermakna secara statistik ($p < 0,05$). Persentase asupan terhadap kebutuhan energi dan protein pada periode awal, tengah hingga akhir perlakuan dengan metoda food recall 1x24 jam dalam keadaan sebanding. Perubahan persentase asupan terhadap kebutuhan energi dan protein antara kelompok P dan K tidak bermakna secara statistik. Persentase asupan terhadap kebutuhan zat besi dengan FFQ semikuantitatif satu bulan pada kedua kelompok sebelum perlakuan tampak sebanding namun perubahan persentase asupan terhadap kebutuhan zat besi antara kedua kelompok bermakna secara statistik. Kadar feritin serum, hemoglobin dan skor perkembangan kognitif sebelum perlakuan pada kedua kelompok dalam keadaan sebanding. Penurunan kadar feritin serum, peningkatan kadar hemoglobin dan peningkatan skor perkembangan kognitif antara kelompok P dan K tidak bermakna secara statistik.

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ABSTRACT

The aim of this study is to find the effect of iron fortified complimentary feeding formula on changes in serum feritin, hemoglobin level and cognitive development score in 6-11 month's old baby. The study was a clinical trial, consists of 38 subjects in the treatment group that had received counseling and iron fortified complimentary feeding formula (P) and 38 subjects in the control group (K) that had received counseling and home complimentary feeding formula for 90 days. Seventy six subjects were admitted from two locations in

kelurahan Kampung Melayu, kecamatan Jatinegara who had fulfill the study criteria. They were divided into two groups using random allocation based on geographic location. Each group had some posyandu that participate the research. Data collected consist of age, weight, height, head circumference, energy, protein and iron intake, serum ferritin, hemoglobin level and cognitive development score. Examinations of serum ferritin, hemoglobin level and cognitive development score were examined before and after intervention. Statistical analysis was using independent t-test, non~ independent t-test and non parametric test. The level of significance was 5%. Each of 38 subjects in both group had completed the study. There was one drop out subject in each I' and K because they got ill. Early data showed equal condition between P and K group. There were statistically insignificant changes on serum ferritin~ hemoglobin level and cognitive development score in two groups ($p > 0,05$). Serum ferritin level had decrease higher in P than K and statistically significant ($p < 0,05$). Intake percentage to energy and protein requirement with 1x24 jam hours food recall before treatment in both groups looks equal. Increasing of intake percentage to energy and protein requirement between P and K group was not statistically significant. Intake percentage to iron requirement with one month semiquantitative FFQ before treatment in both groups was comparable. Increasing of intake percentage to iron requirement between P and K group was statistically significant. Serum ferritin level, hemoglobin and developmental scores before treatment in both group looks equal. Decreasing of serum ferritin level, increasing of hemoglobin and increasing of cognitive developmental scores between P and K was statistically insignificant.