

# Korelasi antara kadar vitamin D serum dengan kadar hsCRP pada usia lanjut = Correlation between serum vitamin D level and hsCRP in elderly

Audrey Haryanto, author

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## Abstrak

Prevalensi penyakit kardiovaskuler (PKV) meningkat seiring dengan proses penuaan. Aterosklerosis yang menyebabkan terjadinya inflamasi dan diikuti peningkatan kadar C-reactive protein (CRP). Vitamin D merupakan vitamin yang memiliki efek antiinflamasi dan dapat menurunkan kadar hsCRP. Penelitian ini merupakan penelitian dengan desain potong lintang yang bertujuan untuk mengetahui korelasi antara kadar vitamin D dengan kadar hsCRP pada usia lanjut (usila). Penelitian dilakukan di Pusat Santunan Keluarga (Pusaka) 12 di Tomang dan Pusaka 39 di Senen pada pertengahan bulan Desember 2012 sampai bulan Januari 2013. Pengambilan subyek dilakukan dengan cara cluster random sampling, dan didapatkan 71 orang subyek yang memenuhi kriteria penelitian. Data dikumpulkan melalui wawancara meliputi data usia, asupan vitamin D dengan metode Food Frequency Questionnaire (FFQ) semikuantitatif serta total skor pajanan sinar matahari mingguan. Pengukuran antropometri untuk menilai status gizi dan pemeriksaan laboratorium yang meliputi kadar vitamin D dan hsCRP. Didapatkan median usia 69 (60-85) tahun dan 80,3% subyek adalah perempuan. Malnutrisi terdapat pada 71,8 % subyek. Asupan vitamin D menunjukkan 98,6% subyek memiliki asupan vitamin D kurang dari Angka Kecukupan Gizi (AKG) Indonesia. Sebanyak 97,2% subyek memiliki skor pajanan sinar matahari rendah. Nilai rerata kadar vitamin D  $38,02 \pm 12,94$  nmol/L dan 78% subyek tergolong defisiensi vitamin D. Nilai median kadar hsCRP 1,5 (0,1-49,6) mg/L, dan 67,6% subyek tergolong risiko PKV sedang dan tinggi. Didapatkan korelasi positif tidak bermakna antara kadar vitamin D serum dengan kadar hsCRP pada usila ( $r=0,168$ ,  $p=0,162$ ).

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The prevalence of cardiovascular disease (CVD) increases in the elderly. Atherosclerosis is a major cause of CVD which stimulate inflammation and followed by increase production of C-reactive protein (CRP). Vitamin D is a vitamin which has anti-inflammatory effects and may reduce level of hsCRP. The aim of this cross sectional study was to find the correlation between serum vitamin D level and hsCRP in elderly. Data collection was conducted during December 2012 to January 2013 on 2 selected Pusaka, Pusaka 12 (Tomang) and Pusaka 39 (Senen). Subjects were obtained using cluster random sampling method. A total of 71 elderly subjects had met the study criteria. Data were collected through interviews including age, vitamin D intake and weekly score of sunlight exposure. Anthropometry measurements to assess the nutritional status and laboratory examination i.e blood levels of vitamin D and hsCRP. Majority of the subjects were female (80,3%), median age was 69 (60-85) years. Malnutrition was occurred in 71.8% of the subjects. Intake of vitamin D showed 98.6% of the subjects were less than recommended dietary allowances (RDA). Majority of the subjects had low score of sunlight exposure (97,2%). Mean of vitamin D levels  $38,02 \pm 12,94$  nmol/L, while 78% the of subjects were categorized as vitamin D deficiency. Median of hsCRP levels 1,5 (0,1-49,6) mg/L, while 67,6% subjects were at moderate and high risk of CVD. No significant correlation was found between serum vitamin D levels and hsCRP levels ( $r=0,168$ ,  $p=0,162$ ).