ABSTRAK

Latar belakang: *small dense Low Density Lipoprotein* (sdLDL) merupakan lipoprotein yang paling aterogenik. Kadar sdLDL dipengaruhi oleh faktor internal dan faktor eksternal (asupan makanan). Pola makan di Indonesia yang tinggi karbohidrat (KH) diduga berperan meningkatkan kadar sdLDL yang merupakan faktor risiko Penyakit Jantung Koroner (PJK). Terdapat 2 jenis besar KH berdasarkan pengolahannya, yaitu *refined* dan *non-refined*. Penelitian ini bertujuan untuk membuktikan hubungan antara jenis asupan karbohidrat dengan kadar sdLDL pada pasien PJK.

Metode: studi belah lintang dengan sampel pasien PJK yang dirawat di RS Dr Kariadi. Kadar sdLDL dan profil lipid diukur dari pengambilan darah vena. Asupan karbohidrat dan lemak per-hari diambil dari *semi-quantitative food frequency questionnaire* (SFFQ) dengan bantuan *food model*. Uji analisis bivariat dilakukan dengan uji pearson atau spearman, uji multivariat dilakukan pada variabel perancu dengan $p<0,25$ dengan uji regresi linear.

Hasil: Didapatkan 30 sampel penelitian dengan PJK dengan sindroma koroner akut (SKA). Rerata asupan karbohidrat total pasien PJK per hari adalah 267.75 gram, dengan rerata persentase karbohidrat dibanding total kalori adalah 55.93%. Angka ini lebih tinggi dari jumlah asupan karbohidrat total yang dianjurkan. Rerata asupan lemak pasien PJK adalah 68 gr/hari (32.76% dari total energi per hari), dengan rerata kadar sdLDL 26,54 mg/dl. Uji korelasi antara KH *refined* vs KH *non-refined* dengan sdLDL ($r=0.328;p=0.077$ vs $r=-0.184;p=0.331$). Analisis multivariat asupan karbohidrat refined dan asupan lemak terhadap sdLDL ($r=0,28;p=0,13$ dan $r=0,45;p=0.01$).

Simpulan: Tidak terdapat hubungan yang signifikan antara asupan karbohidrat dengan kadar sdLDL pada pasien PJK

Kata kunci: karbohidrat, karbohidrat *refined*, sdLDL, penyakit jantung koroner

ABSTRACT

Background: *small dense Low Density Lipoprotein (sdLDL) was the most atherogenic lipoprotein. Its influenced by internal and external factors including food consumption. Indonesian people mostly take a diet of high carbohydrate (CH) that believed to correlate with higher sdLDL level and predisposed to Coronary Heart Disease (CHD). There were 2 types of CH based on the processing ways, refined and non-refined CH. The study's purpose was to prove the correlation between different types of CH intake with the sdlDL level in CHD patients.*

Methods: *cross sectional in CHD patients hospitalized at Dr Kariadi hospital. The sdLDL and others lipid profile examined from venous blood. The CH and fat intakes per-day were collect from an interview using semi-quantitative food frequency questionnaire (SFFQ) and food models. Pearson and Spearman test used for bivariate analysis. Variables with $p<0,25$ was included in multivariate analysis using linear regression test.*

Results: *There were 30 samples with CHD came with acute coronary syndrome (ACS). Mean of total CH consumption per day was 267.75 gram. Mean of percentage of CH from total calories per day was 55.93%. This number was higher than advised. Mean of refined CH intake was 161.80 gram per day. Mean of non-refined CH intake was 57.81 gram per day. The total CH mostly derived from refined CH (76%) rather than non-refined. Mean of sdLDL level was 26,54 mg/dl. Correlation between refined CH vs non-refined CH with the sdLDL levels ($r=0.328$; $p=0.077$ vs $r=-0.184$; $p=0.331$). Multivariate analysis was analyzing refined CH and fat intake to sdLDL levels ($r=0,28$; $p=0,13$ and $r=0.45$; $p=0.01$).*

Conclusion: *There was no significant correlation between carbohydrate and sdLDL level in coronary heart disease patients.*

Key words : carbohydrate, refined carbohydrate, sdLDL, coronary heart disease