

# Hubungan antara kadar high sensitivity C-reactive protein dengan Skor SYNTAX sebagai gambaran derajat aterosklerosis pada penderita Penyakit Jantung Koroner Sstabil = The Association between high sensitivity C-reactive protein level and SYNTAX score as representation of atherosclerosis severity in patients with stable coronary artery disease

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## Abstrak

Latar Belakang: Kadar hsCRP berhubungan dengan mayor adverse cardiac events. Pada PJK stabil, hubungan antara kadar hsCRP dengan skor SYNTAX sebagai gambaran derajat aterosklerosis koroner belum jelas.

Tujuan: Mengetahui hubungan antara kadar hsCRP dengan skor SYNTAX pada penderita PJK stabil, dan mengetahui titik-potong kadar hsCRP yang dapat membedakan antara kelompok skor SYNTAX rendah dengan yang tinggi.

Metode: Observasional potong-lintang pada consecutive 93 subjek penderita PJK stabil dewasa yang menjalani angiografi koroner di RSUPNCM pada bulan Mei sampai September 2018, untuk memperoleh skor SYNTAX. Diambil darah dari arteri perifer sebelum tindakan angiografi untuk pemeriksaan hsCRP dan laboratorium dasar. Dieksklusi penderita infeksi berat, trauma, PGK, sirosis hati, keganasan, pengobatan steroid. Selanjutnya data dikumpulkan dan dianalisis. Skor SYNTAX dikelompokkan tinggi bila  $> 27$ , dan rendah bila nilai  $< 27$ . Untuk menilai titikpotong kadar hsCRP dipakai uji Sperman karena distribusi data tidak normal.

Hasil: Ditemukan rerata umur 60,23 tahun (SB 8,984), IMT 26,30 Kg/m<sup>2</sup> (SB 3,903), kol-LDL 117,74 mg/dL (SB 36,31). Kadar hsCRP dan skor SYNTAX tidak dipengaruhi oleh IMT atau kol-LDL (hsCRP-IMT:  $r:0,032$ ;  $p:0,772$ ; skor SYNTAX-IMT:  $r:-0,021$ ;  $p:0,849$ ; hsCRP-kol LDL:  $r:-0,149$ ;  $p:0,266$ ; skor SYNTAX-kol LDL:  $r:0,159$ ;  $p:0,234$ ). Ditemukan korelasi positif lemah hsCRP dengan skorSYNTAX ( $r:0,270$ ;  $p:0,009$ ) dan Titik-potong pada kadar hsCRP 2,35 mg/L (sensitifitas 0,69; spesifisitas 0,53). Nilai AUC 0,554, IK 95%,  $p: 0,472$ , merupakan diskriminasi yang kurang baik.

Simpulan: Pada penderita PJK stabil, kadar hsCRP berkorelasi positif lemah dengan skor SYNTAX sebagai gambaran derajat aterosklerosis. Kadar hsCRP dengan titik-potong  $> 2,35$  mg/L dapat membedakan kelompok yang mempunyai skor SYNTAX rendah dengan kelompok skor SYNTAX tinggi, namun nilai prediksinya relatif rendah.

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Background: High sensitivity C-reactive protein levels are associated with mayor adverse cardiac events. In stable CAD, the association of baseline hcCRP level with coronary atherosclerosis severity assessed by SYNTAX score were not clear.

Objective: To investigate the association between hsCRP level and SYNTAX score in patients with stable CAD, and to know cut-off point of hsCRP level which can differentiated between the group of low SYNTAX score and of high SYNTAX score.

Methods: Cross-sectional observation to the consecutive 93 subject adult patients of stable CAD,

undergoing coronary angiography in Cipto Mangunkusumo General Hospital on May to September 2018 to obtain SYNTAX score. The blood tests were taken from peripheral artery prior to carrying out of coronary angiography to obtain level of hsCRP and laboratory data base. The exclusion were severe infection, trauma, CKD, cirrhosis hepatitis, malignancy, and steroid therapy. The SYNTAX score will be differentiated between the group of high if the value  $> 27$ , and the group of low if the value  $< 27$ . Spearman analysis will be used to evaluate hsCRP cut-off point.

Results: Average age was 60,23 year (SD 8,984), BMI 26,30 Kg/m<sup>2</sup> (SD 3,903), and LDL-cholesterol 117,74 (SD 36,31). The Level of hsCRP and SYNTAX score were not influenced by BMI or LDL-cholesterol (hsCRP - BMI:  $r:0,032$ ;  $p:0,772$ ; SYNTAX score - BMI:  $r:-0,021$ ;  $p:0,849$ ; hsCRP- LDL-cholesterol:  $r:-0,149$ ;  $p:0,266$ ; SYNTAX score - LDL-cholesterol:  $r:0,159$ ;  $p:0,234$ ). We found positive correlation (weak) between hsCRP and SYNTAX Score ( $r:0,270$ ;  $p:0,009$ ). Cut-off point was found in the hsCRP level 2,35 mg/L (sensitivity 0,69; specificity 0,53). AUC 0,554, CI 95%,  $p: 0,472$ , were the poor discrimination.

Conclusions: There were positive (weak) correlation between hsCRP level and SYNTAX score in stable CAD patients. Cut-off point in the hsCRP level  $> 2,35$  mg/L can differentiate between the group of low SYNTAX score and of high SYNTAX score, but the prediction value is low-grade.