

## ABSTRACT

*Atherosclerotic is one of the cardiovascular diseases that can be caused by high blood glucose level. As the blood glucose level increases, the risk of cardiovascular disease increases too, therefore checking blood glucose level using venous blood glucose or peripheral blood glucose is important. This study aimed to determine the difference between venous fasting blood glucose (VFBG) and peripheral fasting blood glucose (PFBG), evaluate the difference between 10 years risk atherosclerotic cardiovascular disease (ASCVD) using Pooled Cohort Equation (PCE) based on VFBG and PFBG in Sleman district. The study was analytic observational with cross sectional design research. Subjects were chosen by purposive sampling technique. Subjects were 40-65 years old and already signed the informed consent. VFBG data were analyzed by Pramita Laboratory whereas PFBG data were analyzed using Accu check<sup>®</sup>. Glucose was checked after fasting for 8 hours. This study used 171 samples. The category comparative test between VFBG and PFBG to categorized diabetes by using Kappa test shows a very good agreement (0,965;  $p < 0,05$ ). Whereas comparative tailed test between venous PCE and peripheral PCE were tested by Wilcoxon test shows that there is no difference between mean values of venous PCE and peripheral PCE ( $p > 0,05$ ).*

**Keywords:** *Atherosclerotic Cardiovascular Disease; Venous fasting blood glucose; Peripheral fasting blood glucose; Pooled Cohort Equation*

## INTISARI

Aterosklerosis merupakan salah satu penyakit kardiovaskular yang dapat disebabkan akibat tingginya kadar gula darah. Semakin tinggi kadar gula darah maka semakin tinggi risiko kardiovaskular. Oleh karena itu pengecekan kadar gula darah penting dilakukan. Pengecekan kadar gula darah dapat berupa darah vena atau perifer. Penelitian ini bertujuan untuk menentukan perbedaan kadar gula darah puasa (GDP) vena dengan kadar GDP perifer, mengevaluasi perbedaan risiko 10 tahun ASCVD menggunakan *Pooled Cohort Equation* (PCE) berdasarkan GDP vena dan GDP perifer pada masyarakat Kabupaten Sleman. Jenis penelitian ini termasuk penelitian analitik observasional dengan rancangan *cross sectional*. Subyek dipilih dengan teknik *purposive sampling*. Subyek berusia 40-65 tahun dan sudah menandatangani *informed consent*. Data diperoleh melalui pengecekan kadar GDP vena oleh Laboratorium Pramita dan kadar GDP perifer menggunakan *Accu check*<sup>®</sup>. Pengecekan GDP dilakukan setelah subyek berpuasa selama 8-10 jam. Total sampel pada penelitian adalah 171 responden. Uji komparatif kesesuaian kategorik GDP vena dan GDP perifer untuk mengategorikan DM dengan menggunakan uji Kappa menunjukkan *agreement* yang sangat baik yakni 0,965 ( $p < 0,05$ ), sedangkan uji komparatif berpasangan PCE vena dan PCE perifer dengan uji Wilcoxon, menunjukkan tidak terdapat perbedaan bermakna rerata PCE vena dan PCE perifer ( $p > 0,05$ ).

**Kata Kunci:** *Atherosclerotic Cardiovascular Disease*; Kadar gula darah puasa vena; Kadar gula darah puasa perifer; *Pooled Cohort Equation*