Aktivitas Enzim Superoksida Dismutase, Katalase, dan Glutation Peroksidase Wanita Penderita Sindrom Metabolik

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Abstract	Rendahnya status antioksidan endogenus memicu perkembangan kondisi sindrom metabolik (SM). Penelitian ini bertujuan untuk mengeksplorasi aktivitas enzim antioksidan superoksida dismutase (SOD), katalase, dan glutation peroksidase (GSH-PX) dalam plasma wanita penderita sindrom metabolik. Penelitian dilakukan periode MaretÃƒÂ¢Ã¢Â‚Â¬Ã¢Â€ÂœNovember 2010, dengan responden penelitian adalah 30 wanita yang memiliki kriteria sebagai berikut: kadar guladarah >normal, body mass index >25 kg/m2, hipertrigliseridemia, high-density lipoprotein (HDL) rendah, usia >40ÃƒÂ,Ã‚Â tahun, dan tinggal di Purwokerto. Seleksi responden dimulai melalui survey di poliklinik internis Rumah Sakit Umum Margono Soekarjo Purwokerto. Kepada calon responden dijelaskan tentang tujuan penelitian, kondisi SM, dan perkembangannya. Calon responden yang bersedia bergabung diminta menandatangani informed consent,ÃƒÂ,Ã‚Â diukur berat badan, tinggi badan, dan tekanan darahnya. Diambil sampel darahnya 2 mL, intravena, ditentukan kadar glukosa darah, trigliserida, dan HDL. Bagian plasma, diuji aktivitas enzim SOD, katalase, dan GSH-PX.ÃƒÂ,Ã‚Â Data dipresentasikan sebagai rata-rata + standard error. Status antioksidan wanita penderita sindrom metabolikÃƒÂ,Ã‚Â rendah, ditunjukkan oleh aktivitas SOD 379,3 Unit/mg protein, katalase 6,42 UI/mg protein, dan GSH-PX 804,9ÃƒÂ,Ã‚Â nmol/g protein, serta kadar malondialdehid (MDA) sebesar 2.943,4 pmol/mL. Karena itu responden perlu asupanÃƒÂ,Ã‚Â kaya antioksidan. Simpulan, status antioksidan peroksidase sama rendah yang ditunjukkan oleh rendahnya aktivitasÃƒÂ,Ã‚Â enzim SOD, katalase, dan glutation peroksidase. [MKB. 2012;44(1):7ÃƒÂ¢Ã¢Â‚Â¬Ã¢Â€Âœ12].Kata kunci: Glutation peroksidase, katalase, sindrom metabolik, superoksida dismutaseÃƒÂ,Ã‚Â The Activity of Superoxide Dismutase, Catalase and Glutathione Peroxidase Enzymes in Metabolic Syndrome WomenThe low endogenous antioxidant status induced development of metabolic syndrome (MetS) condition. The aim of this research was to explore superoxide dismutase (SOD), catalase (Cat), and glutathione peroxidase (GSH-PX) plasma activity on metabolic syndrome women plasma. Respondents were thirty women with blood glucose level >normal, body mass index >25 kg/m2, hypertrigliceridemic, low level cholesterol-high-density lipoprotein (HDL), the age >40 years and live in Purwokerto. RespondentsÃƒÂ¢Ã¢Â‚Â¬Ã¢Â„Â¢ selection was started by a survey at internist polyclinic ofÃƒÂ,Ã‚Â Margono Soekarjo General Hospital Purwokerto. They were motivated and given an explanation about aim of the research, their diseases and development risk who were willing to be respondents were asked to sign the informed consent. Then, their body weight, height and blood pressure were measured. Their blood sample of 2 mL were taken intravenously and tested for blood glucose, triglyceride and HDL levels. Plasma was tested for the activities of SOD, Cat and GSH-PX enzymes. Presented data was mean + standard error. The antioxidant status of MetS women were low, showed on the activities of SOD, catalase, and glutathione peroxidase enzyme were 379.3 Unit/mg protein, 6.42 UI/mL, 804.9 nmol/g protein respectively, and malondialdehyde (MDA) level was 2,943.4 pmol/mL. Therefore, they need food enrich antioxidant. In conclusions, peroxidase antioxidant status was similar shown by low SOD, catalase and glutathione peroxidase enzyme activity, [MKB. 2012;44(1):7ÃƒÂ¢Ã¢Â‚Â¬Ã¢Â€Âœ12].Key words: Catalase, glutathione peroxidase, metabolic syndrome, superoxide dismutaseÃƒÂ,Ã‚Â DOI:ÃƒÂ,Ã‚Â http://dx.doi.org/10.15395/mkb.v44n1.75
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