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Centella asiatica as a potential plaque stabilizer: Future preventive therapy for cardiovascular disease

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WHO states that Cardiovascular Disease (CVD) is the cause of 31% of deaths worldwide reaching 17.7 million deaths per year. Causes of CVD include smoking, unbalanced food intake, low physical activity and excessive alcohol consumption. The common pathophysiology of CVD is the formation of atherosclerotic plaques which begins with endothelial dysfunction that is closely related to Diabetes Mellitus (DM). Existing treatment focus on preventing the formation of atherosclerotic plaques by lowering blood cholesterol levels and blood viscosity thereby preventing the formation of shear strength that can damage the endothelial layer. *Centella asiatica* (CA) is a well-known herbs used as oxidative-stress remedy. Literature review was conducted to determine its potency in preventing CVD by searching two journal databases, PubMed and EBSCOhost. The search was carried out using Boolean Operator as follows: Cardiovascular AND therapy AND *Centella asiatica*. Sources are not year-limited and include animal studies, RCT reports or related reviews. Based on literature review, there are various studies linking the protective effect of CA on CVD. *In vivo* study conducted by Ramachandran, et al. showed that in mice with DM, lipid profiles of DM mice were given asiatic acid shifted towards normalcy which reduce the risk of atherosclerotic plaque formation. RCT studies conducted by Cesarone, et al. showed that in the group given CA therapy for 12 months, there was an increase in GSM parameters and an improvement in the texture of atherosclerotic plaques which showed the formation of stable with low risk for thrombus. RCT study conducted by Luzzi, et al. on high-oxidative stress asymptomatic patients given Pycnogenol and CA extract showed an increase in the stability of atherosclerotic plaque as indicated by an increase in plaque density, decrease in the number and size of plaques. These results indicate the potential of CA as a good preventive cardiovascular therapy.

Biography

Nindya Permata Bunda Surya Utami is an undergraduate student of Faculty of Medicine, University of Indonesia (FMUI) who has high interest in doing research. She is dedicated toward her study and always eager to learn new things.

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