

Symposium I. Prevention in Cardiometabolic Disorder

The Role of Smoking Cessation in Cardiovascular Disease

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Abstract

Indonesia is in the world 1st rank for the number of male smokers over the age of 15 years. It is based on the latest data of The Tobacco Atlas 2015. The data has shown, as many as 66 percent of men in Indonesia are smokers. "In other words, two out of three men over 15 years of age in Indonesia are smokers".

Smoker is defined as someone who is currently active in smoking or has quit smoking but it is still less than six months or someone whose exposed to smoking environment. Smoking has caused about 100 million deaths during this twentieth century. In the control-case study (INTERHEART), smoking has been shown to increase the risk of non-fatal MI (myocardial infarction) by almost three-fold compared with a never-smoked population. In addition, the risk of MI increased by 6% for each additional cigarette. The highest population of smokers is owned by young men (about 60%). Although the highest relative risk is found in the class, the MI risk caused by cigarettes increases with age. Where the greatest impact of smoking is seen among younger patients and among women. Smoking is associated with all types of sudden cardiac death. The risk of sudden death of smokers are threefold when compared with nonsmokers.

Smoking has acute and chronic effects. The acute effects of smoking are decrease in myocardial oxygen supply and increase oxygen demand, as well as acute hemodynamic changes in the form of increased heart rate, systemic and coronary blood vessel resistance, myocardial contractility, and increased arterial stiffness. In addition, smoking is also associated with an acute increase in the number of endothelial cells in the blood circulation. The chronic effects of smoking include endothelial dysfunction, increased oxidative low-density lipoprotein (LDL) modification, decreased high-density lipoprotein (HDL), induced systemic inflammatory responses, increased leukocyte count, C-reactive protein, platelet activity and aggregation, Antithrombotic with pro-thrombotic factors, decreased fibrinolytic activity, and increased thickness and stiffness of artery walls.

To help patients quit smoking there are two methods that are often used which are non-pharmacotherapy and pharmacotherapy methods. The non pharmacotherapy method in Indonesia aids with 5 As and ABC, as follows: (Ask) Ask smoking status, (Advise) Advice to stop smoking, (Assess) Motivation review on stop smoking, (Assist) Help and Advice, (Arrange) set up Follow-up. In general, the higher intensity of counseling, the higher success rate of quitting smoking. While in pharmacotherapy methods use Fagerstorm test to measure the severity of nicotine addiction before using nicotine replacement therapy. Every smoker who has smoked regularly over a certain period of time will be addicted but they will have different level of addiction. The score of 0-2 are light dependence, 3-4 are mild moderate dependence, 5-7 are medium-dependence score, 8 and above are heavy dependence. The results of these scores can determine the level of nicotine dependence where score above 3 is considered to require additional nicotine replacement therapy. A meta-analysis study concludes that the combination of behavioral therapy and pharmacotherapy is two to three times more effective in patients with CVD.