



Smoking: A Major Risk Factor for Stroke

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ABSTRACT

Smoking has a distractive impact on human health that greatly influences the chance of developing stroke. In India, the third top risk for health loss is the smoking that leads to approximately 1 million deaths every year. Smoking is the main cause for 10% of the stroke deaths. The risk of stroke will be double due to smoking. According to a recent Indian study, smoking is the third most common cause of stroke. When compared to non smokers, smokers are three times more likely to have a stroke. Usually a stroke can be caused by interruption of blood supply to the brain due to the blockade by a clot or burst of the blood vessel. When compared to the non smokers and non hypertensive patients, a smoker with hypertension is 15 times more prone to have a subarachnoid hemorrhage. Second hand smokers were twice likely to have a stroke when compared to the persons who work or live in a non smoking atmosphere. There is an increased chance of having stroke for the non smokers who were married to smokers. The best way to prevent to stroke is to quit the habit of smoking. At present, for quitting the habit of smoking various supportive measures were available that includes group therapy, counseling, nicotine replacement therapy and help line support. Deaths due to smoking can be escapable and preventable by complete cessation of smoking. Quitting the habit of smoking reduces the risk of stroke significantly. Awareness should be created regarding the health risks associated with smoking and the benefits associated with the cessation and prevention of smoking which helps in reduced health costs on the society to live in a healthy environment.

Keywords: Smoking, Smoker, Non- Smoker, Stroke.

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Received 12 November 2014, Accepted 18 November 2014

INTRODUCTION

In this era, smoking has become a trend which has a distractive impact on human health. Smokers are having an increased chance of getting various severe health complication that can cause temporary or permanent damage which are often life threatening and fatal. When compared to non smokers, smokers are more likely to have the health complications such as stroke, lung cancer and heart disease.

Smoking greatly influences the chance of developing stroke. In developed countries, stroke is the 3rd leading cause of death, 2nd leading cause of dementia and 1st leading cause of disability. Every year, around 20 million people were suffering from stroke and out of these people, 5 million people were becoming fatal¹. The risk of stroke increases with the age and males were at high risk of developing stroke when compared to females². In less developed countries, the occurrence of stroke deaths were two-third³. World Health Organization (WHO) estimated that 80% of stroke cases in the world would occur in low and mild income countries especially in India and china by the year 2050. In India, 1.6 million cases of stroke will report annually and at least one-third of them will become disable by 2015. The incidence of stroke is approximately 25% higher in males than in females and more than 50% of all the stroke survivors were depending on their family members and others for their daily needs and activities^{4,5}.

In India, the third top risk for health loss is the smoking that leads to approximately 1 million deaths every year. Smoking is the main cause for 10% of the stroke deaths⁶. The risk of stroke will be double due to smoking^{7,8}. The contribution of the Indians among the world smokers was 12% and approximately 120 million smokers were there in India. According to a recent Indian study, smoking is the third most common cause of stroke⁹. When compared to non smokers, smokers are three times more likely to have a stroke and if a smoker smokes 20 cigarettes per day he/she may have six times more likely to have a stroke.

The tobacco smoke consists of 7000 toxic chemicals that include mainly carbon monoxide, hydrogen cyanide and formaldehyde. The carbon monoxide the results from cigarette smoke can damage the walls of the arteries. The risk of developing of atherosclerosis may cause the narrowing of arteries. Smoking decreases the levels of high density lipoprotein (HDL) cholesterol and elevates the levels of low density lipoprotein (LDL) cholesterol in the blood stream. The decreased levels of HDL cholesterol can increase the risk of occurrence of stroke¹⁰. Usually a stroke can be caused by interruption of blood supply to the brain due to the blockade by a clot or burst of the blood vessel. This blocks the supply of oxygen and nutrients to the brain

which results in damage of the brain tissue¹¹. The risk of having an ischemic stroke can be double than the person having the habit of smoking¹⁰. Recently, investigators compared the data of more than 80 international studies which were published between the years 1966 to 2013. From this study, they concluded that smoking is linked to more than 50% higher risk of having ischemic stroke in both males and females and 17% higher risk of having hemorrhagic stroke in females than in males¹². Hypertension can also be developed by the habit of smoking which is a major risk factor for stroke. If a person is having hypertension he/she will be 5 times more prone to have a stroke when compared to a smoker with normal blood pressure and 20 times more prone to have a stroke when compared to a non smoker with normal blood pressure. When compared to the non smokers and non hypertensive patients, a smoker with hypertension is 15 times more prone to have a subarachnoid hemorrhage¹⁰.

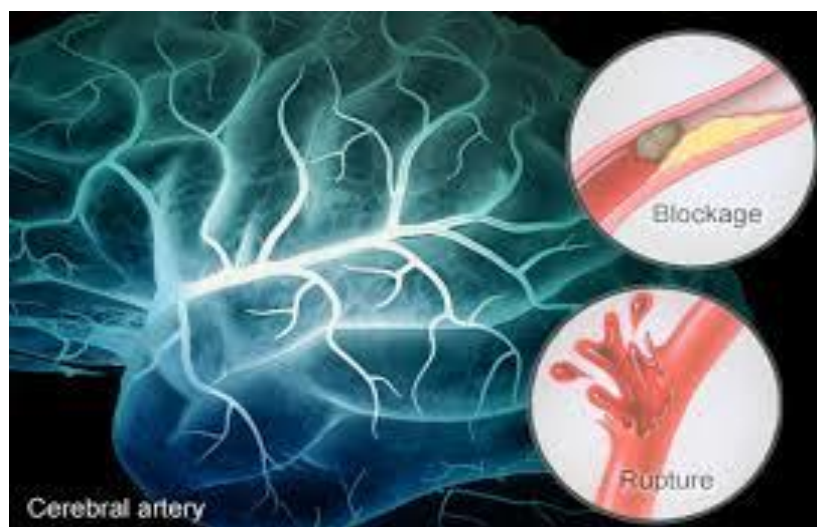


Figure 1: Blockage and Rupture of Cerebral Artery

Second hand smokers were twice likely to have a stroke when compared to the persons who work or live in a non smoking atmosphere¹³. There is an increased chance of having stroke for the non smokers who were married to smokers¹⁴. Smoking increases the risk of stroke in women especially who were using the oral contraceptives pills. An Australian study revealed that smokers who got their first stroke have 30% higher risk of getting another stroke or death when compared to non smokers¹⁵.

Benefits of smoking cessation

In order to prevent the further stroke, we should strongly recommend the patient to stop smoking. The benefits of quitting the habit of smoking can be observed within an hour by improving the health. The levels of oxygen will be returned to normal and the levels of carbon monoxide will be reduced to half within 8 hours. The ability to smell and taste will be improved

after 48 hours. Breathing becomes easier and the energy levels go up within 72 hours time. When compared to before, the skin becomes less wrinkled after 1 month. Lung function can also be improved up to 10% between 3 to 9 months. The risk of stroke can be significantly decreased when compared to that of a life time non smoker after 5 years. The risk of developing lung cancer comes down to half when compared to a smoker after 10 years and the risk of occurrence of heart attack is the same, when compared to a life time non smoker after 15years¹⁰.

Supportive measures for smoking cessation

The best way to prevent to stroke is to quit the habit of smoking¹³. At present, for quitting the habit of smoking various supportive measures were available that includes group therapy, counseling, nicotine replacement therapy and help line support. The usage of drugs such as Varenicline and Bupropion can also be used to quit smoking. Nicotine replacement therapy products can be available as over the counter medication from any pharmacy. But before starting the nicotine replacement therapy, it is advisable to get the suggestion from a physician or a pharmacist. The other aids that could be helpful for quit smoking include glucose tablets, which can be helpful to decrease the cravings¹⁰.

CONCLUSION

Smoking is one of the major contributory factors of stroke. Deaths due to smoking can be escapable and preventable by complete cessation of smoking. Quitting the habit of smoking reduces the risk of stroke significantly. Awareness should be created regarding the health risks associated with smoking and the benefits associated with the cessation and prevention of smoking that helps in reduced health costs on the society to live in a healthy environment.

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