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E –CIGARETTE: EFFECTIVE SHIELD OR THREAT TO HEALTH?

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ABSTRACT Cigarette smoking is the largest risk factor for morbidity and mortality in all over world. Smoking prevalence is higher in males rather than females. Cigarette smoking leads to various health disease, psychological behavior changes and nicotine addiction. Supporting smokers to quit as soon as possible is one of the most urgent priorities in healthcare professionals. Electronic cigarettes (e-cigarette) are novel devices that simulate aspects of cigarette smoking and deliver nicotine to users.

KEYWORDS : Cessation,E-cigarette,health,nicotine,smoking

INTRODUCTION

Cigarette smoking, hereafter referred to as "smoking," is the largest single risk factor for premature death in developed countries. Smoking prevalence is higher in males as compare to females.[1] Nearly all tobacco use begins during youth and progresses during young adulthood. More than 3,200 children age 18 or younger smoke their first cigarette every day.[2] Young people who smoke are in danger of: addiction of nicotine, reduced lung growth, reduced lung function and increased cardiovascular dysfunction.[2] Supporting smokers to quit as soon as possible is one of the most urgent priorities in healthcare professionals.[3] Smoking cessation is highly cost-effective and confers immediate health benefits for smokers. Usual care in smoking cessation treatment includes behavioral support and medications such as nicotine replacement therapies (NRT; nicotine patches, gum, inhalators, lozenges, nasal sprays), bupropion and varenicline.[3,4] All are effective treatments, but to further enhance the tobacco control goal of reducing smoking prevalence, a strategy of harm reduction for smoking has been proposed.[5] Electronic cigarettes (e-cigarettes) are novel devices that simulate aspects of cigarette smoking and deliver nicotine to users.[3,4]

E –CIGARETTE

The first E-cigarette (EC) was invented in China in 2003 by pharmacist Hon Lik as a means to quit smoking. E-cigarette is a diverse group of battery-operated inhalation devices capable of delivering nicotine in a cloud of aerosol generated by heating a liquid mixture of propylene glycol, vegetable glycerol, water, ethanol, flavorings and other additives that usually include nicotine. The aerosol is generated by a heating coil that is activated when suction is applied to the mouthpiece or a button is pressed by the use.[3,5] The EC user (known as a 'vaper') inhales and exhales the vapor . The aerosol looks like tobacco smoke but, unlike cigarettes, it is not generated continuously and is only visible when the user exhale.[3] In a short time, electronic cigarettes have become a multi-billion dollar industry. Since their introduction to the market, prevalence of ever-use among smokers in the USA appears to have increased from _2% in 2010 to >30% in 2012, and the rate of increase appears to be similar in the United Kingdom, Ireland and other Western countries.[4] E-cigarettes could help smokers to quit and accelerate the smoking decline by supplementing other tobacco control measures, while E-cigarettes can be a threat to health that could undo the progress made by the tobacco control movement over the past decades, as smoking is more available in public.[5]

E-cigarettes have evolved considerably from early devices. The first generation products were small cigarette lookalikes ('cigalikes') with low capacity batteries and a heating element surrounded by a liquid-soaked poly-foam ('cartomiser'). Most cigalikes include an LED at the tip that lights up when suction is applied, but generally with a color that distinguishes them from conventional cigarettes.[3] More recent second-generation and third-generation E-cigarettes do not resemble cigarettes in size or shape, have higher-capacity batteries, larger atomisers, and a refillable (transparent) tank.[3,4] The newer devices offer advantages to users over earlier ones because they generate a more consistent aerosol that contains greater nicotine concentration and provide users with the ability to modify different components of the device(i.e. the battery voltage or the wick used to absorb the liquid) and to alter the amount of nicotine in the aerosol. Hundreds of different brands and models of E-cigarettes are available, along with thousands of different liquid formulations sold in cartridges or in small refill bottles.[3]

Role of E-cigarette in smoking cessation:

Smokers use E-cigarette to quit smoking, to cut down the number of cigarettes smoked per day, and to use a product that is perceived as being 'healthier' than conventional cigarettes .Smokers appear to have a preference for cigarette smoke, therefore, E-cigarette may have an advantage over current cessation treatments because they so closely approximate smoking visually and behaviorally. Many of the sensory and behavioral aspects of smoking, which smokers trying to quit usually miss such as the non-nicotine rewards and critical sensory motor cues of the smoking hand-to mouth action, visual cues or feelings in the throat are simulated by using E-cigarette.[3,5] In regards to safety at an individual level, there is concern about exposure to toxicants in EC vapor and the overall level of risk to health from EC use is considered to be far lower than that of smoking. First, EC aerosol does not contain carbon monoxide, nor most of the toxicants found in cigarette smoke. E-cigarette may help smokers cut down the number of cigarettes smoked compared to conventional cigarette.[3,5,6]

E-cigarette as health threat:

Smoking is a behavior influenced by a wide range of factors including nicotine addiction and psychological factors such as expectancies, beliefs, drives, motives and impulses as well as sensory components and aspects of the behavior itself. An electronic device, E-cigarette that can deliver nicotine without the harmful ingredients associated with tobacco smoke (carbon monoxide and tar) and which provides some of the psychological effects of smoking (i.e. mimicking the hand-mouth action, providing the feeling of vapor in the mouth) may be appealing for behavior change since it can address both the physical and psychological aspects of the addiction.[5,6,7] Between 30–60 percent of E-cigarette users continue to smoke whilst using E-cigarette. Forty-five to 58 per cent of smokers who try E-cigarettes don't continue to use due to lack of satisfaction (e.g. less enjoyable than cigarettes, didn't feel like smoking or poor craving reduction) and a further 8 percent stop using due to practical difficulties/technical faults. E-cigarette may increase the prevalence among children and young people, the possibility of relapse among ex-smokers.[4,6,8,9]

CONCLUSION

E-cigarette may be an effective alternative smoking cessation method as it helps in reduction of smoking meanwhile same time it causes behavioral changes and lack of satisfaction in addictive person so relapse can occur. Smoking is dangerous to health and can be hard to give up. Nicotine addiction, in any form is very powerful and happens quickly. It's easier for anyone to avoid starting the use of tobacco in the first place than it is to quit later on. Government should make rule regarding no advertisement of cigarettes should go on TV, radio, billboards, or in magazines that appeal to youth anywhere. Health professionals should encourage parents to talk to their kids about reasons to avoid tobacco use, and to protect their children from second

hand (ear infection, respiratory infections and asthma attacks) smoke exposure.

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