Electronic Cigarette: Bridge to Quitting & Not a Substitute!

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INTRODUCTION

Smoking is the leading cause of preventable death in the world and hence significant effort is made in order to promote, assist and maintain smoking cessation. Several methods have been recruited to this cause. Behavioral therapy had a relatively modest effect. Drug interventions used nicotine replacement therapy (NRT) which reduces the symptoms of nicotine withdrawal, anti-depressant therapy with bupropion (marketed by GlaxoSmithKline as Zyban and other names), a weak dopamine and nor-epinephrine reuptake inhibitor to counteract depression caused by smoking cessation, and varenicline (trade name Chantix in the USA and Champix in Europe, marketed by Pfizer) which is a nicotinic acetylcholine receptor partial agonist. Its mechanism of action is considered to be stimulating release of dopamine to reduce craving and withdrawal and at the same time blocking the full spectrum of neurobiological effects of smoked nicotine. Data from meta-analyses show odds ratios for smoking cessation ranging from 1.6 for bupropion to 2.96 for varenicline, always in favor of the intervention, in 12 months. However, despite the effectiveness of these therapies, rates of smoking remain high at one year in the treatment groups and the development of novel methods is warranted.

Electronic Cigarette

Electronic cigarette (e-cigarette) has been marketed as a smokeless alternative to conventional cigarette, cheaper and safer, and as a potential cessation method and it gained significant popularity quickly. Sales from the e-cigarette market doubled from $250 to $500 million between 2011 and 2012, and are expected to quadruple by 2014. However, certain legal issues have arisen since e-cigarettes contain nitrosamines, diethylene glycol, and other potentially harmful substances. The Food and Drug Administration in the US suggested that the sale of e-cigarettes should be prohibited or regulated as dangerous nicotine delivery systems and the US Court of Appeals decided that e-cigarettes may not be marketed as a safer alternative to cigarettes, or as a smoking cessation device, but instead must be sold as a smokeless tobacco product subject to the same rules and regulations of other tobacco products.

The chemical analysis of the solution and vapor of e-cigarettes, which represents the potential perils from extended use, is also controversial. In most of the studies their ingredients are non-toxic and non-carcinogenic, especially in the low quantities delivered. They include nicotine, propylene glycol, glycerin, and tobacco flavoring. A small amount of diethylene glycol (approximately 1%), a known carcinogen and an
The electronic cigarette has gained significant popularity among smokers both as a substitute for conventional tobacco use and as an aid to smoking cessation. The delivery of harmful substances and elements via e-cigarette use seems substantially lower compared with conventional smoking but the effects of vaping in health status, especially after prolonged administration have not been fully elucidated yet. Therefore, a prolonged use of e-cigarettes as a substitute for conventional smoking is not advisable until more trials assess their long-term consequences. A more sensible ambition would be to employ vaping as a bridge to quitting, providing that after a reasonable time period e-cigarette will be discontinued as well. The initial trials have been encouraging towards this direction but more...
research is needed to define the exact position of electronic cigarette in contemporary preventive medicine.

REFERENCES

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