SMOKING CESSATION: ABSTINENCE WITH GUM

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Introduction

Cigarette smoking is recognized as the main cause of premature and preventable death in the country. In 1996, the National Health and Morbidity Survey found that almost half of the adult male in the country smoked cigarettes (1). Smoking cigarettes does not only cause physical withdrawal, but also life long addiction. Despite this high prevalence of cigarette use in the country, the smokers are often neglected and not offered effective assistance in quitting. Apart from preventing the uptake of cigarette smoking among young adults and children, treating these cigarette smokers will obviously reduce future health burden.

Case 1

Mr YR is a 45 year old retired army personnel who came to the quit clinic requesting for professional help to stop smoking on Valentines day. He wanted to quit smoking as a Valentine day present to his wife of 20 years. He had smoked for 27 years and consumed more than 20 cigarettes a day. He had tried to quit on his own twice before but relapsed due to peer pressure. This time he wanted to quit to please his wife and also due to health reasons. After assessing him, he was in the action phase of Prochaska and DiClemente stage of behaviour change and the severity of nicotine addiction, according to Fagerstrom was moderate addiction. A baseline exhaled carbon monoxide level of 18 ppm (particles per million) was recorded. He was given counseling and treated with nicotine chewing gum 2mg, with advice and instructions.

He came for follow up after one week. He had not smoked any cigarettes. There was no side effects reported with the nicotine gum, however he admitted to being tempted to smoke when watching indirect cigarette television advertisements. He was surprised that there was no withdrawal symptoms and claimed to breath better. His wife was very happy and he had the full cooperation and support of his family. He took 3 nicotine chewing gum a day. The exhaled carbon monoxide reading was 3 ppm.

He came for follow up at week 2 and week 4. By week 4, he did not need any nicotine chewing gum anymore. He claimed to feeling wonderful, something which he had not felt in many years; as there was no more cigarettes to turn to! He had started to join games and other sports and was happy as there was no more 'sangkut' feelings in the lungs when he participate in sports. The exhaled carbon monoxide reading was 2 ppm.

He was followed up at 3, 6, 9 and 12 months. He was still cigarette free. This was confirmed by exhaled carbon monoxide readings. He had no weight change as he was very active in sports.

Case 2

Mr SD is a 49 year old man who also came to the quit clinic as he wanted professional help to quit smoking. He began smoking at the age of 23 years old and smoked more than 20 cigarettes a day, with a maximum of 30 cigarettes a day. He had tried to quit smoking twice but also relapsed due to peer pressure. His reason for quitting was due to financial reasons as the price of cigarettes had gone up. After assessment, he was also in action phase of Prochaska and DiClemente stage of behaviour change and the severity of nicotine addiction according to Fagerstrom was severe addiction. The exhaled carbon monoxide reading was 20 ppm. He was given counseling and nicotine chewing gum 4 mg, with advice and instructions.

He came for follow up 5 days later. He had totally quit smoking and his family was very happy. He took 3 to 4 nicotine chewing gum per day, when he had the urge to smoke cigarettes. There was no side effects reported but he admitted that he still had the craving for cigarettes, but this was relieved with the nicotine chewing gum. For him, the nicotine chewing gum made him feel confident that this time he would succeed in stopping smoking permanently: as the nicotine chewing gum help control his urge and withdrawal symptoms, he can psychologically prepare himself to fight against and forget cigarette and its temptations. The exhaled carbon monoxide reading was 6 ppm.

He came for follow up at week 2,4,8 and 12. At each visit he was still cigarette free, but could not wean himself from the nicotine chewing gum. At this point, detailed history and more counseling was given, with emphasis on relapse prevention and how to wean him from

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the nicotine chewing gum. At week 16, he was taking 1 to 2 nicotine chewing gum per day and at week 20, he had completely stopped taking the nicotine chewing gum. At week 24, 28, 32 and 36, he was confirmed cigarette free and the exhaled carbon monoxide reading was 2 ppm at each visit.

Discussion

Few medical interventions are as cost effective as smoking cessation in producing population wide health gains. (2). The smoking status of all smokers should be assessed at every opportunity. All smokers should be offered assistance to quit smoking. When seeing a patient, a few key points can be covered within 5-10 minutes: set a date to stop and stop completelyon that day; review past experience to determine what helped and what hindered; plan ahead, identify future problems and make a plan to deal with them, tell family and friends and enlist their support; and if needed administer nicotine replacement therapy. It is also important that the misconceptions about the effectiveness for smoking cessation are dispelled.

A smokers' motivation to quit smoking can be assessed by using the Prochaska and DiClemente stage of behaviour change (3). A smoker could be in precontemplation, contemplation, action, maintenance or relapse. It is important to assess how ready the smoker is to quit smoking as then the treatment offered could be tailored accordingly. After that, the severity of nicotine addiction should be assessed by the Fagerstrom questionnaire (4). This will decide whether a smoker needs pharmacological therapy or not; mild addiction may quit with counseling alone, but moderate and severe nicotine addiction might need counseling and pharmacotherapy to effectively quit smoking. Expired breath carbon monoxide readings is taken as a tool to assessed abstinence and to motivate patients.

In a smoker, the desire to smoke is established and reinforced by a combination of factors, some of which are psychological in nature and others of which are pharmacological. Psychologically, smoking is associated with pleasurable situations such as having a cigarette after a meal or during a coffee break. Smoking is also frequently associated with stressful situations. Pharmacologically, the habitual smoker is dependent on nicotine. Therefore, it is very important that every smoker who wants to quit smoking, receive counseling, to help them address and overcome the situations above.

The pharmacotherapy available in Malaysia now is nicotine replacement therapy. It is safe, doubles cessation rates as compared when no nicotine replacement therapy is used and therefore should be recommended to all smokers who want to quit smoking (5,6,7). The rationale for nicotine replacement therapy is based on three factors : smoking withdrawal symptoms are primarily caused by nicotine depletion, the severity of smoking withdrawal symptoms is cited as the most common reason for relapse and nicotine replacement alleviates withdrawal symptoms and enable the smoker to cope with non drug elements of the addiction (8,9).

Nicotine replacement therapy reduces the craving for cigarettes and the withdrawal symptoms that occur during the process of quitting smoking. There are three types of formulation available in Malaysia; chewing gum, patch and inhaler. The nicotine chewing gum provide user controlled nicotine release for oral absorption. It should be chewed whenever the smoker gets an urge to smoke. The strength used is according to the smokers' nicotine dependence. The chewing gum delivers nicotine at a lower dose and at a slower rate than cigarettes, where the plasma nicotine concentration approximate one third (for the 2 mg) and two third (for the 4 mg) of that achieved by smoking a cigarette. The most frequently reported side effects include headache, dizziness, gastrointestinal discomfort, nausea, vomiting, while local adverse events include sore throat, throat and apthous ulcer. The unusual taste may also make the chewing gum not acceptable (10). Fortunately in the 2 cases above, both patients tolerated and accepted the drug well.

The recommended duration for nicotine chewing gum therapy is three months, but treatment can be discontinued once the daily usage is down to 1-2 pieces per day. In the first patient, he was weaned off nicotine gum within a month, but the second patient, due to higher nicotine addiction needed a longer time. Nicotine replacement therapy should be avoided in those with recent myocardial infarction, unstable angina pectoris, serious cardiac arrythmias, active duodenal or peptic ulcer. It should also be used with caution in patients with diabetes mellitus, hyperthyroidism or phaechromocytoma. However, nicotine replacement therapy presents less risk than continued smoking in all the above patients. (10)

Conclusion

Nicotine chewing gum when administered together with counseling is an effective aid and safe for the treatment of nicotine dependent cigarette smokers who are motivated to quit. With supervision and encouragement, it has good effect in overcoming this lethal habit.

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