Review Article

Tobacco cessation by prescription - A 180 degree turn

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Abstract

Utilisation of tobacco is one of the most serious problems affecting human health worldwide, despite the fact that the early fatality caused by tobacco use are growing, regardless of the fact that it is avoidable tobacco consumption is very common, considerable resources have been allocated to this issue. On tobacco prevention, a range of strategies have been tested but the ratio of death due to tobacco and number of tobacco consumers is increasing day by day. Various impediments to tobacco quitting have been recognized, all of which contribute to the failure of various tobacco cessation programs and methodologies. Individuals in the India have attempted or considered quitting smoking at some point in their lives but ended in failure. Existing tobacco cessation programs have not out-turned in a decrease in the figure of tobacco users or deaths, necessitating a new strategy. Tobacco cessation on prescription, developed from physical activity on prescription (PAP), can be a useful method in terms of public health. But yet no studies have ever been conducted over this. Further studies on this can explore results of tobacco quitting after prescription from general physician or other medical practitioner, evaluative beliefs about tobacco consumption and barriers in quitting even after prescription. Hence the present review was done with explore the outcomes for cessation of tobacco based upon utilization of tobacco cessation by prescription (TCP) methodology in Indian scenario. This review paper focuses on TCP as a need for newer approach pertaining to Indian perspective. Future study should look at whether raising the rate of stop attempts are improving the tobacco cessation rate in the general population after the implementation of TCP.

Keywords: Cessation, prescription, quitting, tobacco, TCP

Introduction

Tobacco usage is the primarily the most avoidable source of mortality worldwide.[1] In adults is one of the leading death factor, with over 6 million people dying each year because of tobacco-related disorder.[2] World Health Organization (WHO) reported, by twentieth century more than 100 million people were killed and will touch the number to 1 billion death worldwide by the end of twenty-first century if current trends continue. Cigarettes, which include various compounds with known carcinogenic characteristics, pesticides, and tar, are the most widely used tobacco products.[3] Apart from cigarettes, there are various forms of tobacco, smokeless, smoked, chewable, and dissolvable tobacco products those are frequently misunderstood by users as being non-harmful.[4,5]

India ranks second globally as a tobacco producer and consumer of tobacco products, after China, with approximately 275 million tobacco users.[6] The country is also recognised for producing and consuming smokeless tobacco of different verity of products to a great extent. Incidence of myocardial ischemia, sudden cardiac death, peripheral artery disease, abdominal aortic aneurysms, and stroke are interconnected to tobacco use.[7,8] Tobacco use significantly raised the chance of developing new arrhythmias, such as fibrillation of atria and ventricle (A-fib and V-fib, respectively) and V-tach as well as the increased risk of heart

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failure leading to sudden death, in a dose-dependent way.[9,10] Regardless of the fact that tobacco has detrimental consequences on human being, primarily affecting the circulatory system, and respiratory system, it has been shown that these consequences and health impacts may be revert by quitting tobacco.

Patients with coronary heart disease who quit tobacco had a 36% lower crude relative risk of death than those who continued its consumption, according to a meta-analysis of 20 trials. Tobacco cessation also reduces acute circulatory manifestations significantly, especially within first few years of quitting.[11] Several cross-sectional studies had provided evidence that the most often stated hurdles to quitting in the general population are diverse. Enjoyment, wants, and management of stress are the most typically mentioned barriers. Habit, take-out manifestations, trepidation of let down and increase in body mass concerns have all been mentioned as hurdles to quitting. Frequently failure of patients to recognise harmful effects of tobacco and hence lack motivation to quit.[12] At the social and community level, there was a dearth of assistance for quitting from health specialists and other service providers.[13] Physicians have a poor track record with tobacco cessation counselling and usually do not intervene. The primary challenges highlighted by an Indian subgroup of physicians were a lack of time and proper tobacco cessation counselling expertise, as well as a worry that the patients would leave their clinic.[14]

Apart from nicotine's highly addictive characteristics, there are a number of effective therapies available to assist tobacco consumer to quit. This comprises tobacco cessation programs, pharmacotherapy, mCessation, and behavioral management, among other measures. There are other strategies as well, but the number of tobacco users has not dropped significantly. The focus of this research is on a fresh technique evolved from PAP. Which is primarily used for treatment cardiovascular disease? For retrieving the information on the TCP information published between 2000 and 2021 were tracked using databases were searched such as ResearchGate, PubMed, and Google Scholars, MedlinePlus. Tobacco cessation publications that have been peer-reviewed were carefully selected. Quantitative information were gathered and analysed in greater depth. In addition to web-based resources, other important resources such as the WHO and CDC (Centers for Disease Control and Prevention) were employed for study. In addition, Scopus, PLOS One were also referred for this article.

Background

Tobacco forms

Tradition bidis, cigarettes, and modern E-cigarettes in addition hookahs, smokeless tobacco, cigars, and pipes have also shown an increase in teenage usage.[15] Adolescents that use these "alternative" tobacco products have varying prevalence rates depending on the socio-demographics of the community studied.

Smoke

Smoking is regarded as stuff to become cool or normal in between peer groups. This group believes to have good consequences, such as coping with stress, worry, and sadness. It is responsible for 30% of all cancer-related fatalities worldwide. Those who smoke cigarettes have a poorer degree of activity of lungs as compared to those who never smoked or tried smoking. Tobacco companies spend billions of dollars advertising their products, mostly to recruit teens and young people, who add to the current load. Adults suffering from chronic obstructive airway disease and malignant lung disease had found to have a common habit of tobacco consumption in the form of smoke. In children and teenagers, there is a link between smoking and periodontal disease [Table 1].

Smokeless tobacco

Dip (snuff), kharra, gutkha, khani, pan masala, snus, and dissolvable are some of the examples of smokeless tobacco.[16] All of these items are either grind or kept in between the lips and buccal mucosa or gums, or breathed as a powder through the nose. People who smoke and dippers consume almost the same amount of nicotine as conventional smokers. These items had reported to be in connection with increase chances of stillbirth or premature delivery, as well as nicotine intoxication, which can lead to death in children who eat them as candies.[16] Smokeless tobacco is not a healthier choice because it can lead to nicotine addiction and smoking. As a result, the use of smokeless tobacco products and smoke form like cigarettes, mixture of marijuana, and tobacco in combination form by youngsters is on the rise.[16]

Tobacco smoke exposure

Smoke particles or remain of cigarette toxoids that collect on surface are referred to as thirdhand smoking (THS) exposure. Particles of smoke (remain of nicotine as well as other harmful components that are present in tobacco smoke) build up on these surfaces, which are thought to mix with indoor contaminants and often generate toxic substances.[17] THS is most commonly found on surfaces present in house (couches, chairs covered with cloth, and mat), but it is also found in cars (covering of cloths on baby seats, seats of the car, and so on). Contact to thirdhand smoke occurs when these toxins are absorbed through the skin, inhaled, or ingested into the body. THS contains a number of carcinogenic, poisonous, and lead-containing compounds.[18] This can be a severe health risk for a tiny child below three years of age who crawls on the floor and use to put their fingers and hands into his or her oral cavity.

Table 1: Effect of tobacco on children and Adults as per World Health Organisation, 2011

EFFECT ON CHILDREN	EFFECT ON ADULT
Chronic pulmonary manifestations	Heart diseases
Disease of middle ear	Oral irritation
Acute pulmonary illnesses	Oral and lung malignancy
Sudden infant death syndrome	Reproductive health of females

The Effects of Tobacco

Tobacco cessation methods

There is a number of well-known tobacco quitting aids, There are seven first-preferred drugs that have emerged to help people quit smoulder for good: Nicotine chew gums, lozenge, transdermal patches, nasal and oral spray, inhaler, Varenicline, and Bupropion SR Nicotine are all examples of nicotine-replacement products. Pharmacotherapies have Tobacco cessation programs such as Quit-line and mCessation are phone-based services that assist tobacco users in quitting. Over 53 nations have applied a toll-free help line for those ready to give assistance for their citizens corresponding to tobacco. Despite their extensive application, information, such as worldwide statistics on how Quit-lines and mCessation programs work in practise and their outcomes, is scarce. Small minority of investigations have shown that complementary (equivalent) and alternative medicine (CAM) for tobacco cessation, such as hypnotism, ayurvedic medications, acupuncture, yoga, deep sleep, and massage treatment, are effective. Chargeable cigarettes also growing more popular and their function in smoking cessation is being contested. Electronic cigarettes are also famous as E-cigarettes, is an electrical machine fitted nicotine delivery system that is a electromechanical device that appears like a regular cigarette and distributes nicotine by breathing vapours rather than burning tobacco. Hundreds of dangerous substances used in the flavor present in the receptacle of E-cigarettes were found in the circulation of many people who inhaled the fumes are well known to produce fitness impact, according to several scientific research studies (may even cause cancer). Toxins have been identified in the bloodstream of those who have been exposed to second-hand smoke from e-cigarettes.

Need for newer tobacco cessation approach

India records the highest fatality rate due to the utilization of tobacco in the world, with an estimated 700,000 plus fatalities per year due to tobacco usage.[19] to help tobacco consumers quit, a variety of non-pharmacological and pharmacological therapies are currently available. The financial burden exerted by tobacco is massive.

Currently available approaches for tobacco cessation include behavioral modification, nicotine replacement therapy and medication, mobile cessation program, various tobacco counselling centres etc., this tobacco cessation programs and methods could result in a huge success if all the problems coming in front of tobacco chewers are removed or reduced to a greater extent. Trepidation of pull-out manifestations, trepidation of let-down, lack of support, availability and affordability, social addition, fear of weight gain, influenced of friends, cultural beliefs, religious practice, etc., are some of barriers or roadblock that reduced success ratio of the entire ongoing program.

Regardless of the fact that governments and organisations have implemented various preventative measures, tobacco is a unfluctuating, continuous, and serious problem in communities all over the globe. As well as the outcome is very less compared to what are required or predicted.Various pass research studies and recent studies offer a suggestion that the key role for accomplishment of any cessation program is played by the individual himself and is the major factor pertaining to failure of this programs.

Prevailing over shortcomings

Recent experimental studies suggest that PAP technique have been developed for patients suffering from long-term cardiovascular diseases such as hypertension, etc., the PAP is a therapy have proven to amplify health and life quality by boosting physical activity.[20] TCP can be derived based on PAP. According to Scopus, PLOS One, PubMed, and Google Scholar, no research on TCP have ever been carried out in India. It is regarded to be highly successful in light of the Indian situation, as it has an adult literacy rate of 84.8% in 2021, according to UNESCO, and is improving day by day as people get more educated, which is good news for the success of this research as well as Indians have typical mentality of believing on what is hand written on a paper compared what is told or explained to them by the doctor. The combination of counselling and medications has been found to be the most effective method for achieving tobacco abstinence rate. As a result, giving Indian this in written form may contribute to reduction in number of tobacco consumers.

Tobacco cessation by prescription

TCP is an idea derived from PAP. This will include handwritten advice from general practitioners or other medical professionals that will include pharmacological treatment as well as behavioral management and the routine that must be followed with further follow ups, as well as assessment of roadblocks with previous treatment and then modification to overcome the problems. Treatment provided by any practitioner would be similar to that provided for any other disease, which would include medication prescriptions as well as behavioral modification for cessation written on a prescription pad, because Indians have a different psychology and attitude toward what is written on prescription paper. They are more likely to accept it than what is told or explained to them, which might be a positive point in view of this study. Even though this method is in nascent stage but it is worth trying, any success in tobacco cessation would add to the arsenal with the tobacco cessation specialist. In a study done by Anne Leppa¨nen 2019, it was concluded that TCP was seen favorably by the informants, however the present organisation of tobacco cessation programs hampered access to treatment for socioeconomically disadvantaged populations. To make it easier to implement, there will need to be more organisational support and resources, as well as different attitudes and understanding among PHC providers on how to engage with tobacco cessation.[21]

Conclusion

This research article emphasizes on the need for a different strategy to tobacco cessation from an Indian viewpoint. Future

research studies should look at whether increasing the pace of stop attempts improves the general population's tobacco quitting rate following TCP deployment. TCP could be the future of Indian cessation programs if the results are good or what are expected this strategy could be applied in alcohol cessation, individuals with chronic drug addicts, betel nut chewing which will result in decrease number of patients of OSMF which leads to decline in number of carcinoma patients and other ill effects caused by alcohol and drug consumption in increase in life expectancies.

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Conflicts of interest

There are no conflicts of interest.

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