

Dual Users of Tobacco: Outcomes of Their Management in a TCC at a Multispecialty Hospital in India

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Abstract

Background: The dual use of tobacco (smoked as well as smokeless tobacco products) is mostly to either circumvent ever-growing smoke-free environment or to obtain a higher dose of nicotine to satisfy its addiction.

Material and Methods: This prospective, non-randomized study of 109 current dual tobacco users over 30 months (September 2017 to February 2020) from a TCC in a multi-specialty tertiary care hospital has focused to observe and report a correlation of the outcomes of the tobacco dependence treatment with critical features in the process- setting up of the quit date, addiction to nicotine and follow-up up to 1 year.

Results: In this male dominated study (99.08%), 41 quitted successfully (36.7%; CI - 28.1, 46.0) while 43 failed to quit (39.4%; CI- 30.6, 48.8) and 26 relapsed (23.9%; CI- 16.6, 32.5). The sole determinant to stay abstinent totally was their ability to stay quit through the follow-up of over 6 months.

Conclusion: The new learning from this study on the dual users of tobacco in India is that to achieve a higher quit rate, there is need is to sustain follow-up for a longer duration among the successful quitters. Endorsing quitting over harms reduction, this study recommends a larger and elaborate multi-centre study in view of their smaller numbers vs. sole users of smoking or SLT.

Keywords: Tobacco; Dual Users; Outcomes; India

Abbreviations

TCC: Tobacco Cessation Clinic; SLT: Smokeless Tobacco; GATS 2: Second Round of Global Adult Tobacco Survey for India; SQ: Successful Quit; FTQ: Failed to Quit; COTPA: Cigarette and Other Tobacco Products Act, 2003

Introduction

Dual users are as concurrent/concomitant users of smoked and smokeless tobacco (SLT) wherein either both are used simultaneously (smoking and use of SLT daily or less than daily or the use of one is being transitioned into another exclusively, i.e. when the user is within the trajectory of dual use due to an incomplete transition [1,2,3]. Usually, a user may begin with one of these at the outset but then shifts to their concurrent use.

The dual use in adolescence mostly begins as “an experimenter heading into risk-taking behaviour” without knowing that it will affect the development of their brain or make them addicted to nicotine. These would never be tobacco-users but for the attraction of various newer products [4].

In adults, the dual use specific to the concomitant use of SLT to smoking is due to the necessity to: (a) circumvent a smoke-free environment at workplace, (b) reduce or eventually quit more harmful smoking, (c) hide the fact of being a smoker from the family which instead accepts chewing betel nut with or without tobacco or (d) sometimes it is to get a higher dose of nicotine to satiate his addictive potential.

India is a country with over 300 million tobacco users with ~11% smokers and ~60% SLT users of the world (~22% of the global burden). With ~32 million dual users currently, GATS 2 [5] reported dual use in 6.3% male adults and 0.4% female adults which account for 15% of all adult male tobacco users and 4% of all female adult tobacco users. Earlier, Gupta, *et al.* [6] too had attributed a highly skewed dual use among males to a very low prevalence of smoking among females. India has seen a reduction in dual use by 1.6% in 7 years- from 5% reported in GATS 1 in 2010 to 3.4% in GATS 2 in 2017 [1].

The dual users are likely to make more attempts to quit but as compared to ever-users they are less likely to succeed [6-9] with higher rate of relapse [9].

The present study was undertaken to assess the some of specific features of dual users seeking treatment for tobacco dependence at a TCC in a multi-specialty hospital in private health sector in India.

Materials and Methods

In a non-randomized prospective cohort of 1001 patients seeking treatment for tobacco dependence at a multi-specialty tertiary care private hospital in western Rajasthan, India, enrolled between September 2017 to February 2020, 119 patients were dual users (11.88%). Following their referrals by the in-house consultants to the TCC, they were all managed by a tobacco treatment specialist, similar to an exclusive smoker or smokeless tobacco user. Their addiction to tobacco products was determined by asking for the frequency of the usage of the products and the average duration of the first use on waking up; those using both products collectively for over 10 times in 24 hours or using either of these within first 30 minutes of waking up were labelled as addicted. The counselling, a mix of cognitive behavioural therapy and motivational interviewing, done through intensive intervention lasted on average for ~30 minutes. Pharmacotherapy comprising of use of nicotine replacement therapy with or without cessation medication was given to 96 patients (80.67%). All patients were followed-up solely by the treating physician through six proactive telephonic calls at 3rd and 7th day and at the end of 1, 3, 6 and 12 months; these were scheduled in concurrence with every patient. Self-reporting was accepted to determine the outcomes as successful quit (SQ- Total abstinence until the latest follow-up but always more than a month), Failed to quit (FTQ- Either did not quit at all or stopped responding to follow-up calls) and Relapsed (after a SQ). Data was analysed using SPSS (version 16). The confidence intervals (CI) were calculated to check the significance of difference between proportions.

Results and Discussion

Demographics

Excluding 10 patients (8.4%) - the former users, dead and ineligible, this study reports results on 109 current dual users (91.6% of the total 119 patients). But for one, all were male patients (99.08%); the majority aged between 3rd to 6th decade of life (101 out of 109; 92.66%). Eighty three were addicted to nicotine (76.14%).

Outcomes

In reference to table 1, 41 quitted successfully (SQ- 36.7%; CI- 28.1, 46.0) while 43 failed to quit (FTQ- 39.4%; CI- 30.6, 48.8) and 26 relapsed (23.9%; CI- 16.6, 32.5). The SQ was higher among those who stayed-on with their first quit date (43.1%) vs. those who attempted twice or more (Table 2). But, the finding was not significant statistically. Their success to quit remained similar regardless of their addiction to tobacco products (Table 3). There were significant differences for the outcomes between those who were followed up for less than 6 months vs. greater than 6 months (Table 4); the SQ dominated the latter (SQ - 63.6% vs. FTQ - 5.8%) whereas in the former FTQ was dominant (SQ - 12.3% vs. FTQ - 70.2%). And, both these findings were significant statistically.

Outcomes	N	% (95% CI)
SQ	40	36.7 (28.1, 46.0)
FTQ	43	39.4 (30.6, 48.8)
Relapsed	26	23.9 (16.6, 32.5)
Total	109	

Table 1: Outcomes of the Present Study.
SQ- Successful quit; FTQ- Failed to quit.

Outcomes	Quit attempts			
	Once		Twice and more	
	N	% (95% CI)	N	% (95% CI)
SQ	28	43.1 (31.6, 55.2)	12	27.3 (15.9, 41.6)
FTQ	20	30.8 (20.6, 42.6)	23	52.3 (37.8, 66.5)
Relapsed	17	26.2 (16.7, 37.7)	9	20.5 (10.6, 34.0)

Table 2: Correlation of the outcomes with number of quit attempts.
SQ- Successful Quit; FTQ- Failed to Quit.

Outcomes	Addiction to tobacco			
	N	% (95% CI)	Y	% (95% CI)
SQ	9	34.6 (17.2, 55.7)	29	34.9 (24.8, 46.2)
FTQ	13	50.0 (29.9, 70.1)	31	37.4 (27.0, 48.7)
Relapsed	4	15.4 (4.4, 34.9)	23	27.7 (18.5, 38.6)
	26	100	83	100

Table 3: Correlation of the outcomes with addiction to tobacco.

Outcomes	Follow up period			
	< 6 months		>= 6 months	
	N	% (95% CI)	N	% (95% CI)
SQ	7	12.3 (5.7, 22.6)	33	63.5 (49.9, 75.5)
FTQ	40	70.2 (57.5, 80.8)	3	5.8 (1.7, 14.6)
Relapsed	10	17.5 (9.4, 28.9)	16	30.8 (19.5, 44.1)

Table 4: Correlation of the outcomes with the duration of the follow-up.
SQ- Successful quit; FTQ- Failed to quit.

Discussion

Like all other studies [2,9,10] this study of dual users too observed a male dominance which is more likely to be a socio-cultural and environmental factor as was stated by Frost Pineda., *et al.*, [2]. May be for the same reason, no other study too has opined any impact gender may have on quitting.

While others have observed that in comparison to the ever-users, the dual users are likely to make more attempts with lesser likelihood of success [6-9] along with higher relapse rate [9], although this study did not observe such an occurrence, the difference was not significant statistically between those who stayed with their initial quit date vs. those making two or more attempts (Table 2).

In this study the outcomes of treatment were uninfluenced by the addiction to tobacco use (Table 3) as was reported by both Wetter., *et al.* [11] and Messer., *et al* [9].

This study unravels a higher success for the dual users who stayed quit for over 6 months (SQ - 63.6% vs. FTQ- 5.8%; Table 4) vs. those who did not follow-up for 6 months (SQ - 12.3% vs. FTQ - 70.2%; Table 4). It needs a detailed assessment whether the factors influencing such an outcome are solely user-centric or this is also due to socio-cultural, economic, educational factors.

While Fisher., *et al* [12], like Timberlake., *et al* [13], endorsed a switch to use of SLT by the smokers who are unable or unwilling to quit or reduce smoking as a “*harms reduction strategy* (Royal College of Physicians, 2007)”, Since quitting outcomes do not get affected by the type of tobacco [14,15], we intend to concur with the recommendation made by Jhanjee [16] to continue focus on Prevention and Quitting, the two pillars of tobacco control with better compliance to the provisions of FCTC and the existing laws locally (such as COTPA in India).

Conclusion

From this prospective, non-randomized study of 109 current dual users, our assessment imparts a new learning that while these do not differ from their counterparts globally in reference to the outcomes of the treatment, having quit successfully sustain total abstinence and follow-up over a longer duration. We endorse prevention and quitting over harms reduction strategy. To improve further, in view of their smaller number vs. sole users of smoking or SLT, this study recommends a larger and elaborate multi-centre study.

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Conflict of Interest

None.

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