C-06

A MULTICENTRE RETROSPECTIVE COHORT STUDY ON TREATMENT OUTCOME OF VARENICLINE

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INTRODUCTION

Varenicline is the most effective pharmacotherapy for successful quit attempts, however associated with cardiovascular (CV) and neuropsychiatric adverse events.[1,2,3] To date, abstinence rate and incidence of adverse events with varenicline use and smoker characteristics related to successful smoking cessation attempts have not been widely studied.

This study aimed to determine the prevalence of smoking abstinence and incidence of adverse events among varenicline users.

METHODS

Study design

Retrospective cohort study

Study site

22 government-operated quit smoking clinics in the state of Perak, Malaysia

Population

Between January 2017 to June 2018

- Patients with comorbids who were referred for smoking cessation
- Walk-in patients who have intention to quit smoking voluntarily

Inclusion criteria

- Adults above 18 years old
- Took varenicline as pharmacotherapy for smoking cessation

Data collection tool

Standard data collection form

Ethics approval

MREC (KKM.NIHSEC.P18-2294(5))

RESULTS

Figure 1: Enrollment of patient

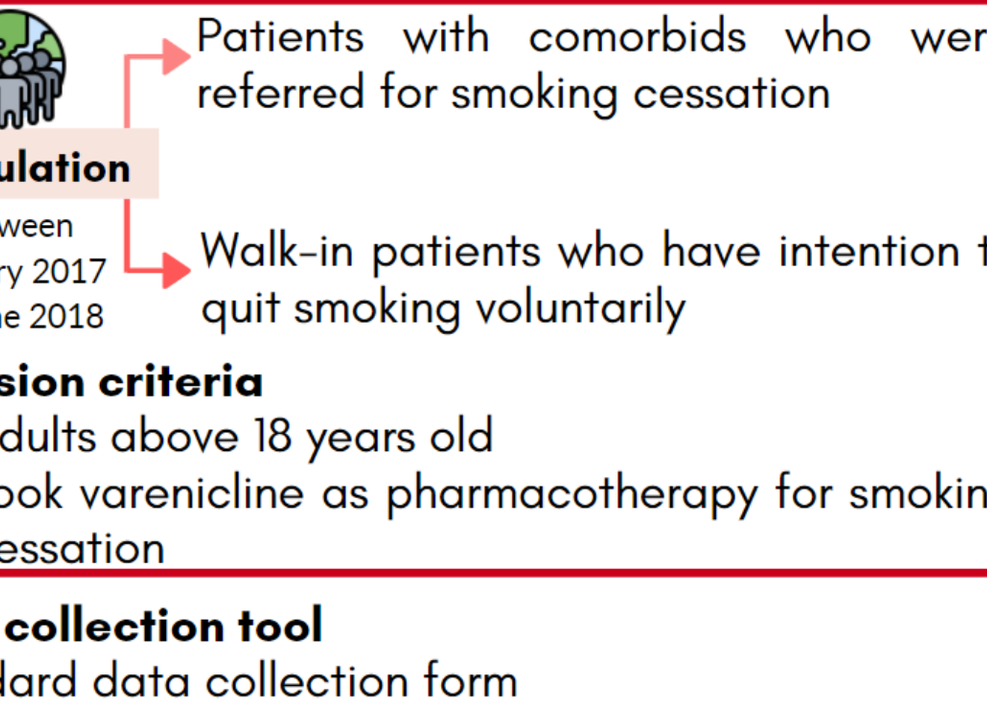

Table 1: Demographic characteristics of patients

Characteristics (n=114)	Frequency (%)
Age (years), in mean ±SD	46.0 ± 14.4
Gender	
Male	104 (91.2)
Female	10 (8.8)
Ethnic	
Malay	70 (61.4)
Chinese	17 (14.9)
Indian	27 (23.7)
Number of cigarette smoked per day (sticks), in mean ± SD	17.0 ± 11.3
Duration of smoking (years), in mean ± SD	26.6 ± 14.9
Fagerstrom score	
0 to 3 (Low dependence)	42 (36.8)
4 to 5 (Moderate dependence)	28 (24.6)
6 to 10 (High dependence)	44 (38.6)
Attempts to quit	
Yes	79 (69.3)
No	35 (30.7)

Table 2: Treatment duration and rate of smoking abstinence

Characteristics (n=114)	Frequency (%)
Treatment duration (week), in mean ± SD	8.8 ± 3.3
Smoking abstinence rate	
Successful	68 (59.6)
Unsuccessful	46 (40.4)

No MAJOR **Adverse cardiovascular events** (CV death, nonfatal MI and nonfatal stroke)

MAJOR **Neuropsychiatric events** (Depression, suicidal ideation/attempt, seizure)

Table 3: Adverse drug events experienced by patients

Type of adverse events	Frequency (%)
Cardiovascular related	
Hospitalization	2 (1.8)
Angina pectoris	1 (0.9)
Neuropsychiatric related	
Altered behaviour	2 (1.8)
Auditory hallucination	1 (0.9)
Others	
Increased appetite	19 (16.7)
Dizziness	18 (15.8)
Dry mouth	12 (10.5)
Nausea	10 (8.8)
Abnormal dreams	9 (7.9)
Insomnia	9 (7.9)
Stomach discomfort	6 (5.3)
Others	21 (18.5)

Table 4: Logistic regression model predicting successful smoking abstinence

Variables	Adjusted odd ratio	95% CI	P-value
Number of cigarette/day	1.102	0.929, 1.103	0.785
Duration of smoking	0.800	0.639, 1.003	0.053
Fagerstrom score			
High	Reference		
Low-to-moderate	1.033	0.164, 6.519	0.972
Without quit attempt	0.330	0.066, 1.657	0.178
Readiness to quit			
Pre-contemplation & contemplation	Reference		
Preparation & action	5.145	1.005, 26.328	**0.049**
Treatment duration	2.445	1.735-3.445	**<0.001**
Adverse events	0.096	0.014, 0.644	**0.016**
Withdrawal symptoms	0.032	0.016, 0.835	**0.032**

DISCUSSION & CONCLUSION

1. Mean duration of treatment was approximately 1-month shorter than recommended duration. Extending treatment duration by improving adherence and prevent dropout may increase smoking abstinence rate.
2. Subjects at preparation and action stage had significant higher odds to quit. Change in level of readiness can be pursued first before initiating pharmacotherapy to better allocate limited resources and produce better treatment outcomes.
3. Intolerance to adverse events and withdrawal symptoms even though minor has led to treatment termination and failure to achieve smoking abstinence. Treatment and counselling to cope with intolerable symptoms can be provided.

In conclusion, majority of the subjects achieved smoking abstinence with varenicline use. Although uncommon, infrequent incidences of CV and neuropsychiatric adverse events were reported, warranting need for continuous surveillance and adverse drug reaction reporting.

ACKNOWLEDGEMENT

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