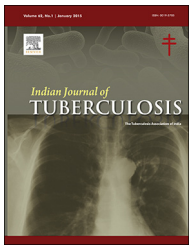
Available online at www.sciencedirect.com
ScienceDirect
journal homepage: http://www.journals.elsevier.com/indian-journal-of-tuberculosis/



Short Communication

Smoking and alcohol consumption: Risk factors for pulmonary tuberculosis among the tribal community in central India

V.G. Rao [a,*], J. Bhat [a], R. Yadav [a], M. Muniyandi [b], M.K. Bhondeley [a], D.F. Wares [c]

[a] National Institute for Research in Tribal Health (Indian Council of Medical Research), Jabalpur, Madhya Pradesh, India
[b] National Institute for Research in Tuberculosis (Indian Council of Medical Research), Spurtank Road, Chennai 600031, India
[c] KNCV TB Foundation, Hague, Netherlands

ARTICLE INFO

Article history:
Received 12 April 2016
Accepted 1 November 2016
Available online xxx

Keywords:
Tuberculosis
Tribal
Smoking
Alcohol
Madhya Pradesh

ABSTRACT

Smoking and alcohol consumption are important risk factors for pulmonary tuberculosis (PTB). A cross-sectional survey was undertaken among the Gond tribe in Jabalpur district of Madhya Pradesh, and information on smoking and alcohol consumption was collected. As compared to females, males had an increased odds for PTB prevalence (odds ratio (OR) 3.2; 95% CI 486.4–1358.4; $p = 0.01$). Similarly smokers and alcohol consumers had an increased odds for PTB compared to non-smokers and non-alcohol consumers, respectively [(OR 3.2; 95% CI 516.4–1986.4; $p = 0.003$); (OR 3.2; 95% CI 480.8–2254.8; $p = 0.009$)]. Persons who were both smokers and alcohol consumers had an equally increased odds of PTB than those who did not smoke and consumed alcohol (OR 4.1; 95% CI 477.6–2581.6; $p = 0.001$). The study findings highlight the need to develop and implement culturally appropriate awareness raising activities among the tribal community to support TB control efforts.

© 2016 Tuberculosis Association of India. Published by Elsevier B.V. All rights reserved.

1. Introduction

India remains the highest tuberculosis (TB) burden country in the world and accounts for one fifth of world's new TB cases and two thirds of the cases in the South-East Asia region.[1] Though many biological, socio-economic, and behavioral risk factors are known to be associated with the development of pulmonary TB (PTB), tobacco smoking and alcohol use are important risk factors for TB.[2]

In the central Indian state of Madhya Pradesh (MP), the tribal population accounts for about a quarter of the total population of the state. The various tribes living in MP have been categorized into 46 ethnic groups, with the Gond tribe being one of such groups. Of the four taluqs (an administrative subunit) in the Jabalpur district of MP, Kundam is a tribal – mostly Gond – dominated taluq, with ≈70% of the overall population belonging to the Gond tribe. A recently conducted TB disease prevalence survey in Jabalpur district observed a higher prevalence of TB disease among the tribal compared to the non-tribal populations.[3] In view of this, studying the risk factors in specific tribal populations assumes relevance, especially as there is no information on the risk factors for PTB disease among the tribal population of the area, such as the Gond. This paper presents results on whether tobacco smoking and alcohol consumption is associated with the

* *Corresponding author at*: Scientist G, National Institute for Research in Tribal Health (Indian Council of Medical Research), Nagpur Road, P. O. Garha, Jabalpur, 482 003 Madhya Pradesh, India. Tel.: +91 761 2370800/818; mobile: +91 94251 58312.
E-mail address: drvgrao@rediffmail.com (V.G. Rao).
http://dx.doi.org/10.1016/j.ijtb.2016.11.009
0019-5707/© 2016 Tuberculosis Association of India. Published by Elsevier B.V. All rights reserved.

Please cite this article in press as: Rao VG, et al. Smoking and alcohol consumption: Risk factors for pulmonary tuberculosis among the tribal community in central India, *Indian J Tuberc.* (2016), http://dx.doi.org/10.1016/j.ijtb.2016.11.009

development of PTB disease among the Gond tribal population in Jabalpur district, Madhya Pradesh state.

2. Methods

As part of the TB disease survey in Jabalpur district, this cross sectional study was conducted in Kundam taluq during 2009–2010. The proportionate sample size for the taluq was estimated as 4479 individuals aged ≥15 years. A random sample of villages was selected to cover the required sample for TB disease survey. The details of the disease survey have been described in its published report.

During the TB disease survey, additional information on tobacco smoking and alcohol consumption was collected from the study population and recorded on a pre-tested and a pre-coded cards by trained investigators. All the completed cards were scrutinized, checked, and computerized by trained data entry operators. Prevalence of disease was compared between exposed and non-exposed groups. The odds ratio (OR) was used as the effect measure. The OR was calculated by measuring the ratio of the prevalence odds of the exposed and non-exposed groups for each risk factor using SPSS 13.0 software (SPSS Inc., Chicago, IL, USA). Informed written consent was obtained from all individuals included in the survey. The ethics committee of the institute approved the study.

3. Results

Of the total 4079 individuals eligible for screening, 3903 (95.7%) were screened for chest symptoms. The prevalence of smoking and alcohol consumption was found to be 22.5% and 16.9% respectively. Males had a significantly higher prevalence of both smoking and alcohol consumption (874; 47.4% and 627; 34.0%) than females (5; 0.2% and 31; 1.5%) ($p < 0.01$).

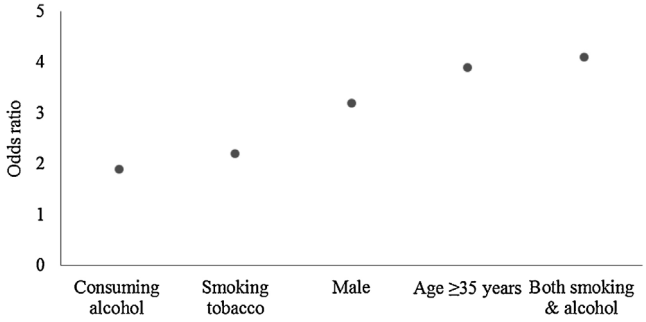


Fig. 1 – Association between pulmonary tuberculosis and odds of risk factors.

The overall prevalence of PTB was 589.3 per 100,000 (95% CI: 349.3–829.3). Table 1 describes the factors associated with PTB. Persons aged >35 years had 3.9 times higher odds of developing TB than persons aged ≤35 years. When compared to female, male had an increased odds for PTB prevalence (OR 3.2; 95% CI 486.4–1358.4; $p = 0.01$). Smokers and alcohol consumers had an increased odds for PTB when compared to non-smokers and non-alcohol consumers respectively [(OR 3.2; 95% CI 516.4–1986.4; $p = 0.003$); (OR 3.2; 95% CI 480.8–2254.8; $p = 0.009$)]. Persons who were both smokers and alcohol consumers had an increased odds of PTB (Fig. 1) than those who did not smoke and consumed alcohol (OR 4.1; 95% CI 477.6–2581.6; $p = 0.001$).

4. Discussion

The study found a significantly higher prevalence of tobacco smoking and alcohol consumption among this ethnic group as compared to the prevalence in the general population of Madhya Pradesh (smoking: 22.5% vs 11.9%, $p < 0.001$; alcohol:

Table 1 – Selected risk factors associated with PTB disease.

Risk factors	Eligible to screen	Total screened	TB cases	Prevalence/ 100,000 95% CI	Crude POR	*p*-value
Age in years						
≤35	2089	2016	5	248.0 (31.0–465.0)	1	
≥35	1990	1887	18	953.9 (514.9–1392.9)	3.9	0.003
Sex						
Female	2118	2060	6	291.3 (58.3–524.3)	1	
Male	1961	1843	17	922.4 (486.4–1358.4)	3.2	0.01
Tobacco smoking						
Non-smoker	3184	3024	12	396.8 (172.8–620.8)	1	
Smoker	895	879	11	1251.4 (516.4–1986.4)	3.2	0.003
Alcohol consumption						
Non-consumers	3408	3245	14	431.4 (205.4–657.4)	1	
Consumers	671	658	9	1367.8 (480.8–2254.8)	3.2	0.009
Tobacco smoking and alcohol consumption						
Nil	3047	2889	11	380.7 (155.7–605.7)	1	
Tobacco smoking only	361	356	3	842.7 (107.3–1792.7)	2.2	0.21
Alcohol consumption only	137	135	1	740.7 (705.3–2186.7)	1.9	0.51
Tobacco smoking and alcohol consumption	534	523	8	1529.6 (477.6–2581.6)	4.1	0.001

Please cite this article in press as: Rao VG, et al. Smoking and alcohol consumption: Risk factors for pulmonary tuberculosis among the tribal community in central India, *Indian J Tuberc.* (2016), http://dx.doi.org/10.1016/j.ijtb.2016.11.009

Download English Version:

https://daneshyari.com/en/article/5672379

Download Persian Version:

https://daneshyari.com/article/5672379

Daneshyari.com