PREVALENCE OF COUGH OF MORE THAN TWO WEEKS IN A RURAL PANCHAYATH AREA IN TRIVANDRUM DISTRICT – A CROSS SECTIONAL SURVEY

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ABSTRACT: BACKGROUND: Case detection is based on identification of TB suspects attending health facilities and subjecting them to sputum examination in a RNTCP Designated Microscopy Centre (DMC). Any patient presenting with cough for more than 2 weeks is a pulmonary TB suspect and is to be referred to the DMC. In a peripheral health institution (PHI) of rural setting, it is expected that at least 2% of new adult out patients are chest symptomatic (pulmonary TB suspects). There is paucity of data regarding the prevalence of cough for more than 2 weeks in community. Objective: To determine the prevalence of cough for more than 2 weeks in a rural community. Materials and Methods: This is a cross sectional study conducted among 239 households in Kallara panchayath in Thiruvananthapuram district Kerala. Results: The prevalence of cough for more than 2 weeks was found to 13.8%, with highest prevalence among the age group of 45 to 60 years. Conclusion: Prevalence of cough for more than 2 weeks in the community is high and need more activities to encouraged sputum to be tested to rule out pulmonary tuberculosis.

BACKGROUND: As per the World Health Organization (WHO) global TB control report 2011, India continues to bear the highest global burden of TB with an estimated 2.3 million incident cases per annum accounting for more than one-fourth of global TB incidence (1). The cough is the major symptom of pulmonary tuberculosis, subjects with coughs contributed 69.5% (2). Case detection is based on identification of TB suspects attending health facilities and subjecting them to sputum examination in a RNTCP Designated Microscopy Centre (DMC). Any patient presenting with cough for more than 2 weeks is a pulmonary TB suspect and is to be referred to the DMC (3). In a peripheral health institution (PHI) of rural setting, it is expected that at least 2% of new adult out patients are chest symptomatic (pulmonary TB suspects). It is expected that on an average 5-15% of the chest symptomatic subjected for sputum examination are found to be sputum smear positive following standard operating procedures of ZN staining (4). The yield of sputum positive cases is not much changed when more than two weeks of cough and more than three weeks of cough were compared, 9.4-11.1% for 2weeks against 11.3-13.5% for 3weeks (5). Usually these chests symptomatic are identified from patients attending general outpatient departments. If we examine 10 patients with cough of two weeks or more duration, it is supposed to identify one smear positive pulmonary tuberculosis. Based on the annual risk of infection (ARI), it is expected that at least 2 to 4% of the patient attending the general OPDs are chest symptomatic. The load of chest symptomatic in community; is still not clear, because of the varying health seeking behavior and use of alternative systems of medicine in rural areas. This study assesses the prevalence of cough for more than 2 weeks in a rural community, where lot of alternative systems exists for cough management.

MATERIALS AND METHOD: This study was conducted in a rural panchayath in Kerala, Kallara which is a field practicing area of Sree Gokulam Medical College. This was a cross sectional survey

conducted during the period from July to August 2013. The study participants in this study were 239 people above the age five years who were the permanent residents of Kallara Panchayath. The sample size calculation was not done due to the limited times for this study. From each house one member was selected randomly and interviewed using a questionnaire after taking informed consent. Study variables include age, sex, education & history of cough more than two weeks within the past six months. Those with chronic cough diagnosed as some other respiratory disorder, and is on treatment were excluded from this study. The questionnaire was translated in local language for easy understanding and the data were tabulated in MS excel 2007 software and analyzed using the statistical software SPSS.16.

RESULTS: Of the total 239 people 23.8% were children(14 years or below) ,44.8% were in the age group of 15 to 44 years, 15.9 % were those within the age of 45 to 60 years, and 15.5% belonged to the age group of >60 years. 51.9% of the study participants were females. The majority of them, 30.5% belonged to just literate group and 14.2% belonged to illiterate group (Table 1). This literacy status is because of the inclusion of children in study subjects. Among the study subjects, 26.8% were unemployed and 24.7% were students.

The prevalence of at least one episode of cough for more than 2 weeks within the past six months was 13.8% (Table 2). One of the major finding in this study is that those within the age group of 45 to 60 years ;28.9% suffered from cough for more than 2 weeks, and those above the age of 60 years 27% had it within the past six months.(Table 3).

Out of the 33 patients with cough of more than two weeks duration, only 7 (31.8%) have undergone sputum examination for the diagnosis of pulmonary tuberculosis.

DISCUSSION: The six month period prevalence of cough for more than 2 weeks in this study was 13.8% which is much higher than the expected prevalence based on Annual risk of Infection (ARI). This prevalence was much higher than the previous prevalence of cough of more than three weeks duration obtained from a study conducted in Trivandrum Corporation area in 2004 (6). A much higher prevalence in the age group of 45 to 60 years and >60 years may be due to some seasonal influence in the last six months period. The prevalence of cough in children is 5.26% which is comparable to the expected estimate for the State of Kerala. In another study, the patients seen by OPD medical assistants, 438 (18.4%) complained of cough: 303 for < 3 weeks and 135 for > or = 3 weeks (7). The sputum referral for AFB staining was also very poor; so a community oriented active screening of chest symptomatic for tuberculosis, and prompt referral for sputum examination may be suggested as the strategy to improve the case finding in Revised National Tuberculosis control programme.

CONCLUSION: Prevalence of cough for more than 2 weeks in the community is high and need more activities to encouraged sputum to be tested to rule out pulmonary tuberculosis. The activity should be mainly oriented to enhance the knowledge regarding pulmonary tuberculosis and importance of sputum testing.

ORIGINAL ARTICLE

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TABLES:

Educational status	Frequency	Percent
Illiterate	34	14.2
Just literate	73	30.5
Primary school	56	23.4
High/higher secondary school	43	18.0
College	20	8.4
Professional	13	5.4
Total	239	100.0

Table 1: Educational Status

Cough of 2 weeks or more	Frequency	Percent
Yes	33	13.8
No	206	86.2
Total	239	100.0

Table 2: Prevalence of cough for more than 2 weeks

Age group in years	COUGH >2WKS		Yes (Percent)	Total
	Yes	No		
<15yrs	3	54	5.26	57
15-45yrs	9	98	8.41	107
46-60yrs	11	27	28.94	38
> 60 years	10	27	27.03	37
Total	33	206	13.81	239

Table 3: Age wise prevalence of cough for more than 2 weeks

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