Prevalence of Chronic Obstructive Pulmonary Disease in North Okkalapa Township, Myanmar

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Background: Chronic obstructive pulmonary disease (COPD) is a growing cause of morbidity and mortality worldwide. Accurate estimate of the prevalence of this disease is needed to anticipate the future burden of COPD, target key risk factors, and plan for providing COPD-related health services. According to worldwide population study, prevalence of COPD is highly variable. In Myanmar, due to lack of population based study on COPD, the burden of the disease in our community is still a question.

Objective: 1) To find the high risk persons for chronic obstructive pulmonary disease by interviewing with screening questionnaire, 2) To confirm the diagnosis of chronic obstructive pulmonary disease in high risk persons by spirometry, 3) To describe the prevalence of chronic obstructive pulmonary disease in North Okkalapa Township, 4) To describe the demographic features (age, sex, smoking status) of chronic obstructive pulmonary disease in North Okkalapa Township.

Methods: A population-based cross-sectional descriptive study was conducted for one year period from January to December 2015 in North Okkalapa Township, Yangon Region, Myanmar, in population of 40 years of age and above resided in North Okkalapa Township. Minimal required sample size was 384 subjects. 390 participants from North Okkalapa Township were selected by multistage sampling. After completing COPD-PS screening questionnaire, 50 participants who got screening score 5 and above were identified as high risk persons and proceeded spirometry by using Spirobank MIR hand-held spirometer. Diagnosis of COPD was made if FEV1/FVC ratio was < 0.70. Data entry, calculation and presentation of descriptive statistics were done by using SPSS Version 16.0.

Results: The prevalence of COPD in North Okkalapa Township was 8.2% (82 of 1000 population, 95% CI 5.7-11.4) and all were smokers. Under 60 years of age, 2.3% were found to have COPD and 60 years of age and above, it was 15.8% (OR - 12.5, p < 0.001). Prevalence among men and women were 10.9% and 5.6%, respectively (OR - 2.06, p = 0.481). Overall smoking prevalence in population was 37.69%, and 61.14% in men and 14.72% in women (OR 9.11, 95%CI 5.46-15.4, p < 0.001).

Conclusion: COPD is more prevalent in older age and male sex. It can be assumed that higher smoking prevalence in men affects the COPD prevalence partly. All of 32 COPD cases (100%) are smoker and no prevalence in non-smoker due to study design aimed only for overall COPD prevalence and high weight of smoking status in screening score.

Recommendations: Smoking is strongly associated with the prevalence of COPD. It is no doubt that smoking is large negative impact on health of a community. Smoking cessation is becoming an increasingly urgent objective for an ageing population, therefore smoking control measures and health education should be reinforced. COPD prevalence can vary from one region to another depending on smoking prevalence, air pollution level, indoor pollution and altitude. Thus, further prevalence studies representing different types of region are recommended.

Keywords: Chronic Obstructive Pulmonary Disease, COPD
1. Prevalence of COPD – 8.2%

2. Prevalence of smoking in study population

Prevalence among different age and sex