

Efficacy of group intervention on tobacco cessation among male employees in health-care setting: A randomized controlled trial

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Background. The tobacco epidemic is one of the biggest public health threats the world has ever faced. World Health Organization has estimated that tobacco use (smoking and smokeless) is currently responsible for the death of about 7 million people across the world each year. The objective of the study was not only to find the effect of group intervention on tobacco cessation but also to describe certain epidemiological factors associated with tobacco cessation and make suitable recommendations to tackle this epidemic.

Methods. A randomized controlled trial was carried out among male employees who were tobacco users in health-care setting in Western Maharashtra. In the study, 60 subjects each in intervention and control arm were taken. Pretested validated questionnaires were used for the study. The intervention comprised of two

sessions delivered 5 weeks apart. Control arm received self-help material (Booklet) immediately after baseline data collection. The outcomes were measured using structured interview schedule. The data were analyzed using SPSS, version 20.

Results. Overall, 13.3% of the study subjects had quit tobacco use post intervention. In the intervention group 21.7% of the participants had quit tobacco since past one month and 5% in the control group (relative risk (RR) = 4.33). Low to moderate nicotine dependence ($p = 0.023$, RR = 6.46) and stage of contemplation ($p = 0.018$) were found to be important predictors of abstinence.

Conclusion. Community-based group intervention for tobacco cessation is the way forward to tackle the tobacco epidemic.

Diagnostic value of bronchoprovocation challenge with adenosine monophosphate versus exercise testing in early diagnosis of asthma

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Background. Airway hyperresponsiveness (AHR) is a characteristic feature of bronchial asthma and is diagnosed using direct and indirect bronchoprovocation tests. The diagnosis of AHR is a challenge in symptomatic patients with a normal baseline prebronchodilator spirometry and postbronchodilator spirometry. Exercise-induced asthma or exercise-induced bronchoconstriction (EIB) is a distinct form of AHR. There is no single test that is sufficient to exclude AHR in symptomatic military personnel with normal spirometry. This study was conducted to compare the diagnostic value of indirect bronchoprovocation test using inhaled adenosine monophosphate (AMP) and exercise challenge test (ECT) in the diagnosis of EIB.

Methods. A crossover study was conducted with consecutive sampling of patients presenting with

symptoms suggestive of asthma and with normal spirometry results who were subjected to both ECT and bronchoprovocation test using inhaled AMP on separate days.

Results. Forty participants were recruited (the mean age: 25 yrs, 100% male). The commonest presentation was breathlessness on exercise (55%). With exercise alone, 40% tested positive for AHR, while with AMP alone, the positivity increased to 53%, and the difference was statistically significant ($p = 0.03$). Exercise alone failed to detect 8 cases that tested positive for AHR by inhaled AMP challenge.

Conclusion. Indirect bronchoprovocation test using inhaled AMP may be used to diagnose AHR in conditions in which exercise challenge testing is not available or the patient is unable to complete ECT.

Bronchial challenge test in patients with a history suggestive of bronchial asthma with normal spirometric studies

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Background. Bronchial hyper-responsiveness (BHR) is the hallmark of bronchial asthma, characterized by clinical features of cough, wheeze, breathlessness and chest tightness which are confirmed by spirometry showing obstructive pattern and reversibility to bronchodilators. In individuals having features of bronchial asthma but normal spirometry, demonstration of BHR with bronchial challenge test (direct or indirect) confirms/ rules out the diagnosis. The aim of this study was to assess BHR in patients (methacholine challenge) with a history suggestive of bronchial asthma but normal spirometry and its role in diagnosis of bronchial asthma.

Methods. This study was conducted at tertiary care respiratory center. Patients having clinical features of bronchial asthma but spirometry not confirming obstructive disorder and or reversibility were included in the study. After written consent, methacholine challenge test with methacholine chloride and exercise

spirometry was done in all patients as per the American Thoracic Society protocol.

Results. A total of 50 (n) patients were included in the study. Among them, 42 patients had clinical features suggestive of bronchial asthma but having normal spirometry and eight patients were diagnosed as they had bronchial asthma in the past but asymptomatic and off drugs were included in the study. At PC20 4mg/ml 32 (64%) patients had a positive test, 28 (66%) symptomatic patients and four (50%) asymptomatic asthmatics. There were no significant side effects with methacholine test.

Conclusion. Airway hyper-responsiveness is an important aspect of bronchial asthma and its demonstration with bronchial challenge (direct and indirect) test is an important diagnostic tool. Methacholine challenge test is a safe procedure to perform under supervision.