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Title: Lung diseases infection and risk of lung cancer

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Body: Previous lung diseases are associated with the development of lung cancer (LC). Tuberculosis, bronchiectasis might cause atypical metaplasia of both squamous and adenomatous type, which explains the identical genesis of some types of LC. The aim of the study was to determine the existence of the eventual causal associations among the previous lung disease and development and distribution of the LC. Methods:The research was conducted as a case-control study. A total of 324 microscopically confirmed cases with LC, and the same number of frequency-matched controls were analyzed using unconditional logistic regression, which provides results in the form of crude odds ratio. The odds ratios and their 95% confidence intervals (CI) were computed.Results:Previous lung disease was registered in 46% of LC patients. Chronic bronchitis was found in 38.9% of patients and in 18.5% of controls. Chest x-ray findings of tuberculosis were present in 7.1% of patients and in 4.6% of controls.The risk was significantly increased in LC subjects with previous lung diseases compared to those who did not have a history of any lung disease (OR=2.83;95%CI 2.01-3.96). There was almost three-fold risk for the development of the LC in subjects who have had chronic bronchitis (95%CI, 1.96-4.01). Subjects with tuberculosis were at a 1.6-fold higher risk to being affected in comparison with those who did not have this disease (95%CI, 0.81-3.07).Conclusion:Previous lung disease is an important risk factor for onset of LC. Each third diseased patient had a history of chronic bronchitis. Due to the established causative relation between cicatrix lung changes and onset of cancer, a strengthened health control of these subjects is imposed as an urgent need.