

The frequency of bronchial anthracosis and its influencing factors in patients undergoing bronchoscopy in Imam Khomeini hospital Ardebil

Background: Bronchial anthracosis is defined as appearance of multiple dark anthracotic pigmentations on large airway mucosa with or without airway narrowing or obliteration. This study aims to investigate the frequency of bronchial anthracosis and its influencing factors in patients undergoing bronchoscopy in Imam Khomeini hospital.

Materials and Methods: In this cross-sectional study, data was obtained from reviewing the files of 900 patients who underwent bronchoscopy in Imam Khomeini Hospital during 2013 to 2015 in Ardabil. Those with dark pigmentation on their airways mucosa were considered as having bronchial anthracosis. During bronchoscopy, samples were collected from the airways in the form of bronchoalveolar lavage and then the smear and culture of these samples were examined for acid fast bacilli. Patients with both positive culture and smear and those with positive culture alone for acid fast bacilli were considered as having pulmonary tuberculosis.

type of fuel used for cooking in the kitchen and for heating in their house, history of smoking, the patient's geographical location and occupation were recorded and evaluated.

Results: Of 900 cases studied in this research, 42 (4.6%) had bronchial anthracosis, out of which 23 (55%) were male and 19 (45%) female and most were in urban areas. The average age in men and women respectively were 62.15 ± 11.17 and 61.19 ± 12.33 . Majority of patients were in the age range of 60 to 70 years. In 17 (40.48%) patients history of cigarette smoking was found.

8 (19%) patients were housewives and in 5 cases of them, there was a history of baking bread in the traditional way. Of 11 farmers with anthracosis, 7(6.63%) patients used fossil fuels for heating. Among the anthracosis patients, 11 (21.2%) subjects had Tuberculosis.

There was a significant difference between age, habitant of patients, pulmonary tuberculosis and bronchial anthracosis. No significant differences were seen regarding history of cigarette smoking, patients gender and bronchial anthracosis ($p>0/05$).

Conclusion: There was a significant correlation between age of patients, pulmonary tuberculosis and bronchial anthracosis, therefore, performing necessary tests and follow-ups for pulmonary tuberculosis is necessary in cases that undergo bronchoscopy for any reason and those with bronchial anthracosis.

Key words: Bronchial anthracosis, Pulmonary tuberculosis, Bronchoscopy