CHARACTERISTICS OF LUNG CANCER DIAGNOSED WITH LOW DOSE CHEST CT SCREENING

S. Choi, C. Lee
Internal Medicine, Seoul National University Hospital Gangnam Center, Seoul, Korea

Aim: The role of chest CT in early diagnosis of lung cancer is controversial in terms of mortality reduction and possible harms of overdiagnosis and unnecessary radiation exposure. Also, the clinical characteristics of lung cancer on CT screening are not well known despite some studies. So we analyzed the characteristics of lung cancers with low dose chest CT screening.

Methods: This study included 15,615 Korean adults who received low dose chest CT for lung cancer screening as part of a health checkup program in Healthcare system Gangnam center from Oct 2003 to June 2010. Patients diagnosed with lung cancer on screening were reviewed retrospectively in terms of clinical parameters such as sex, smoking, and final pathology and staging.

Results: 35 lung cancer patients were identified. Lung cancer detection rates were 0.22% (crude annual incidence rate 61.0/100,000/year). Male and female ratio was 6:4. 18 of 35 lung cancers occurred in high-risk group (>20 pack-years smoking) and 17 in low-risk group (ex-smokers and non-smokers). 76% of lung cancers were less than 3cm (<1cm – 30%, <2cm – 22%, <3cm – 24%). Of 35 patients with lung cancer, video-assisted thoracic surgery (VATS) segmentectomy or lobectomy was performed in 10 patients and lobectomy in 16. Four patients underwent chemotherapy and 5 patients were managed with supportive therapy because of advanced stage or old age. Two patients died despite treatment, but the other patients survived. Adenocarcinoma (especially bronchioloalveolar carcinoma, BAC) is more prevalent. Some patients with BAC histology in early stage could be treated with VATS. The comparison of clinical characteristics with Korean national cancer registry data showed somewhat different characteristics.

Conclusions: Lung cancers detected in screening have somewhat different clinical characteristics from the general population and LDCT may be useful for discovering lung cancer in early, operable stage.

Disclosure: All authors have declared no conflicts of interest.