Ameliorative effect of smoking cessation after the diagnosis of lung cancer on the tumor progression and mortality

Mohammad Barary

Babol University of Medical Sciences, Babol, Iran

Statement of the Problem: Lung neoplasms is one of the leading causes of cancer death worldwide, of which about half of these patients are active smokers around the time of diagnosis. Therefore, as the current evidence could not define the effect of smoking cessation on the progression of the tumor and mortality of lung cancer patients, we conducted a study to assess this possible correlation.

Methodology & Theoretical Orientation: This prospective study was conducted on 686 early-stage (I-IIIA) non-small cell lung cancer (NSCLS) patients in the affiliated hospitals of Babol University of Medical Sciences, Babol, Iran, who received the diagnosis of NSCLS and followed annually during the period of 2012-2021. Overall survival, progression-free survival, and NSCLC-related mortality and hazard ratios (HRs) for the mentioned criteria were assessed.

Findings: During the nine-years study period, 490 (71.4%) deaths, 410 (59.7%) NSCLC-related deaths, and 261 (38.1%) cases of tumor progression were recorded. The adjusted median overall survival time was 24.4 months higher in smoking quitters' group than those who continue smoking (7.5 versus 5.4 years, respectively, p = 0.001). Moreover, progression-free survival (61.5% versus 49.5%, p = 0.004) and 5-year overall survival rates (68.5% versus 54.9%, p = 0.001) were higher in smoking quitters' group. Smoking cessation was associated with decreased risk for overall mortality (HR = 0.64, 95% CI = 0.49-0.83), NSCLC-related mortality (HR = 0.71, 95% CI = 0.52-0.96), and tumor progression (HR = 0.66, 95% CI = 0.52-0.87), after adjusting for confounding factors.

Conclusion & Significance: In conclusion, our findings indicate that smoking cessation after lung cancer diagnosis increased overall and progression-free survival in smokers with early-stage lung cancer

Biography

Mohammad Barary started his medical education at Babol University of Medical Sciences in September 2017. From the beginning of his studies, in the second month to be exact, he began to develop a passion for research in the field of biomedical sciences as in my opinion, a physician should not only focus on the treatment aspects of its specialty, but in fact, it is the physician-scientists that revolutionized the science and explore the unknowns in the edge of knowledge. From the start of this pandemic in Iran, he went to the university hospitals of his institution and worked on a registry project aimed to record all COVID-19 patients. Recently, as the growing number of articles mention the role of artificial intelligence in the future of medical sciences, he have been learning machine learning and its different modalities for his future projects. With all said, it is noteworthy that his ultimate goal is to be a cancer researcher specializing in the development of new treatment options for gastrointestinal cancers, especially pancreatic neoplasms.

m.barary@mubabol.ac.ir