TP53 mutations in Korean patients with non-small cell lung cancer

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Although TP53 mutations have been widely studied in lung cancer, the majority of studies have focused on exons 5-8 of the TP53 gene. More importantly, the frequency and clinical implications of TP53 mutations in Korean patients with lung cancers have not been investigated. Therefore, we searched for mutations in the entire coding exons (exons 2-11), including splice sites of the TP53 gene, in Korean patients with non-small cell lung cancer (NSCLC). Mutations of the TP53 gene were determined by PCR-based direct sequencing in 176 surgically-resected NSCLCs. A total of 69 mutations (62 different mutations) in 65 tumors were identified. Of the 62 mutations, 12 were novel mutations that have not been reported in any types of cancers. TP53 mutations were more frequent in males, ever-smokers and squamous cell carcinomas than in females, never-smokers and adenocarcinomas, respectively (all comparisons, P < 0.001). Missense mutations were most common (52.2%), but frameshift, nonsense, and splice-site mutations were also frequently observed at frequencies of 18.8%, 15.9% and 10.1%, respectively. Of the 69 mutations observed, 9 (13.0%) were found in the oligomerization domain. In addition, the proportion of mutations in the oligomerization domain was significantly higher in adenocarcinomas than in squamous cell carcinomas (23.5% vs 2.9%, P=0.01). Our study provides clinical and molecular characteristics of TP53 mutations in Korean patients with NSCLCs.

A case of lung metastasis of papillary thyroid carcinoma presenting with tuberculous pleurisy

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Papillary thyroid cancer is most common type among thyroid cancer. The common site of distant metastasis from thyroid cancer is lung, the presentation of which has been reported to be from 5 to 30 years after the initial diagnosis of thyroid cancer. Tuberculous pleural effusions accounts for approximately 5% of all disease due to Mycobacterium tuberculosis. Large amount of pleural effusion may hide other disease like malignancy. ADA level in pleural fluid is known useful for differential diagnosis in patient with pleural effusion. A 70-year-old female patient visited due to dyspnea. She had large amount of pleural effusions and Ziehl-Neelsen stain revealed a few acid-fast bacilli in pleural biopsy, but ADA level in pleural fluid was 2.4 IU/L. Pulmonary nodules were found by computed tomography after drainage of pleural effusions, and were diagnosed by histologic examination as pulmonary metastasis from papillary thyroid carcinoma. We report this case with a review of references.