CÁNCER DE PULMÓN

Challenges in Facing the Lung Cancer Epidemic and Treating Advanced Disease in Latin America.

Raez LE, Santos ES, Rolfo C, Lopes G, Barrios C, Cardona A, Mas LA, Arrieta O, Richardet E, Vallejos S C, Wistuba I, Gandara D, Hirsch FR.

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Abstract

Lung cancer, the deadliest cancer worldwide, is of particular concern in Latin America. The rising incidence poses a myriad of challenges for the region, which struggles with limited resources to meet the health care needs of its low- and middle-income populations. In this environment, we are concerned that governments are relatively unaware of the pressing need to implement effective strategies for screening, diagnosis, and treatment of lung cancer. The region has also been slow in adopting molecularly-based therapies in the treatment of advanced disease: testing for epidermal growth factor receptor mutations and anaplastic lymphoma kinase rearrangements are not routine, and access to targeted agents such as monoclonal antibodies and tyrosine kinase inhibitors is problematic. In this paper, we review the current situation in the management of lung cancer in Latin America, hoping that this initiative will help physicians, patient associations, industry, governments, and other stakeholders better face this epidemic in the near future.

High Epidermal Growth Factor Receptor Mutation Rates in Peruvian Patients With Non-Small-Cell Lung Cancer: Is It a Matter of Asian Ancestry?

Pinto JA, Mas LA, Gomez HL.

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In a recent article, Lopez-Chavez et al reported a high mutational rate of epidermal growth factor receptor (EGFR) in Peruvian patients (37%) that is higher than in other Latin American countries such as Mexico, Bolivia, Venezuela, and in a mixture of Latinos in the United States. High mutational rates of the EGFR gene in Peruvian patients were reported previously in independent cohorts. Mas et al reported a frequency of 39.3% (n = 122), and Arrieta et al reported a frequency of 51.1% (n = 393). Although the frequency of EGFR mutations in Peruvian patients is higher than other reports, these rates could be explained by environmental factors.

However, ancestry could also play an important role in explaining this fact. We would like to point out two events that could lead to a gene flow explaining the high prevalence of EGFR mutations in Peruvian patients. Population of the Americas in the late Pleistocene epoch by migrants from Asia through the Bering land bridge shaped the genetic pool of Native Americans. The second event occurred after slavery was abolished in Peru and a massive wave of Chinese workers reached the Peruvian coast (approximately 100,000 between 1849 and 1880), with a Peruvian population estimated at 2 million in 1850.

Although there are not many projects that are evaluating Asian ancestry markers in Latin American countries, data for ancestry admixture proportions for Mexico, Colombia, and Peru (0.012, 0.021, and 0.035, respectively) suggest a correlation between ancestry proportion and rate of EGFR mutations.

On the other hand, the Helicobacter pylori bacterium accompanied humans in the migration waves. These bacteria are not only a chronic pathogen in humans, but also coevolve with their hosts and have been used to trace human migration routes. Work by Devi et al with Peruvian strains of H. pylori found considerable homology with Asian strains. Another interesting fact is the high prevalence of human T-cell lymphotropic virus, ranging from 7% to 25%, in several Peruvian cities. This pattern is typical of some Asian countries such as Japan.

High rates of EGFR mutations in Peruvian patients with non–small-cell lung cancer could be a signature of Asian ancestry in the Peruvian population.

Clinical features and toxicity of tuberculosis treatment in patients with cancer

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Abstract

OBJECTIVES: To assess the clinical and epidemiological characteristics of active tuberculosis in patients with malignancy and to assess the influence of TB treatment on cancer management at the National Institute of Neoplastic Diseases from 2008 to 2013. MATERIALS AND METHODS: Observational study of TB cases diagnosed by positive sputum microscopy in patients with cancer. Clinical information, evolution, and pathologic information of neoplasia was reviewed. RESULTS: 76 cases of active tuberculosis after being diagnosed with cancer were found. The median age was 51.3 years. Median follow- up was 2.1 years. The most common cancers were acute lymphocytic leukemia (14.5%), for the hematologic cancers; and cancer of the cervix (14.5%), breast (10.5%), and gastric (7.9%) for non-hematological cancers. 27.6% of patients had recurrence of the tumor; TB diagnosis confounded the initial staging by 6.9% and was initially stated as cancer recurrence in 11.1% (breast and colon cancers). The diagnosis of tuberculosis delayed or influenced the dose reduction of the antineoplastic treatment in 11.1% of the cases (acute lymphocytic leukemia and non-Hodgkin lymphoma). 8.3% of patients had toxicity to the TB treatment. CONCLUSIONS: Cancer patients may have active tuberculosis infection. The interference effect of diagnosis and treatment of uberculosis on the assessment of cancer and cancer treatment in our series is minimal.