Haematological malignancies

Tuberculosis exposure and the risk of cancer

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Aim/Background: The association of latent tuberculosis infection (LTBI) with subsequent cancer remains unclear. We investigated the risk of future cancer among tuberculosis (TB) contacts with or without subsequent TB activation.

Methods: Using the Taiwan National Health Insurance Research Database, we conducted a nationwide population-based study. TB Contacts during 1997–2012 were included as the study cohort. Patients with antecedent cancer and TB were excluded. Data from 11,522 TB contacts and 46,088 age-, sex-, and enrollment date–matched subjects during 1997–2012 were analyzed. The two cohorts were monitored until December 31, 2012 for incidence of cancer and TB infection. LTBI was defined as a TB contact with subsequent TB activation. The primary endpoint was occurrence of newly diagnosed cancer.

Results: There was no difference in cancer development between the TB contact cohort and comparison cohort (log-rank test, p = 0.714). After multivariate adjustment, the hazard ratio (HR) for cancer among the LTBI patients was 2.29 [95% confidence interval (CI), 1.26–4.17; p = 0.007]. There was increase in cancer incidences for several specific cancer types, including multiple myeloma (HR 340.28), lung (HR 2.69), kidney and bladder (HR 6.16), hepatobiliary (HR 2.36), and gastrointestinal (HR 2.99) cancers. None of the 136 TB contacts who received isoniazid prophylaxis developed cancer.

Conclusions: TB exposure did not increase the risk of future cancer. LTBI patients had a higher risk of future cancer. However, isoniazid prophylaxis may reduce this risk.

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