

中文題目：非小細胞癌併肺結核感染患者併用吉舒達及抗結核藥物後發生的嚴重肝炎

英文題目：Severe hepatitis related to pembrolizumab and anti-TB drug in a patient with non-small cell lung cancer and pulmonary tuberculosis.

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**Background:** Pembrolizumab, an immune checkpoint inhibitor (ICI), has proved efficacy in advanced in non-small cell lung cancer (NSCLC) but is also accompanied with adverse effects, known as immune-related adverse events (irAEs). Hepatitis is one form of irAE, and occasionally maybe fatal. Anti-TB drug induced hepatotoxicity is also a well-known side effect, found in 5%-28% patient treated with anti-TB drug. Here we report a rare case of severe hepatitis followed by Pembrolizumab administration and anti-TB drug in a NSCLC patient with high tumor programmed death ligand-1 (PDL1) expression and pulmonary tuberculosis.

**Method:** All the data and images were collected from chart review retrospectively in Taipei Veterans General Hospital in Taiwan.

**Results:** A 72-year-old male heavy smoker was found with stage IV non-small cell lung cancer over right upper lobe RUL with metastatic lymphadenopathy and left lung metastasis. No druggable oncogene was found and his tumor PDL1 expression level was 100%. Pulmonary tuberculosis was also diagnosed by positive sputum acid fast stain and anti-TB drug was prescribed with no remarkable side effect. Single agent of Pembrolizumab was administrated one month later after anti-TB medication. However, severe hepatitis developed 3 weeks later after Pembrolizumab. Drug inducing hepatotoxicity was impressed and anti-TB drug was hold. High dose of methylprednisolone (2mg/kg/day) was also started for suspected irAEs. The patient's liver function improved gradually after treatment. We re-introduced anti-TB drug with isoniazid/ethambutol followed by rifampin. The dose of steroid was tapered gradually and the patient was discharged without sequelae. Pembrolizumab was discontinued permanently due to severe side effect, and the patient's tumor progressed 3 months later after hepatitis.

**Conclusion:** ICI can induce life threatening hepatitis in patients with NSCLC with coexisting pulmonary tuberculosis. Physician should aware this side effect and inform the patient before ICI use. Further research is needed to examine how to use ICI in patients with advanced malignancy and tuberculosis.