NINTEDANIB TREATMENT FOR BLEOMYCIN-INDUCED LUNG INJURY - FIRST REPORT

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Objective:

Although the antineoplastic agent bleomycin is known for more than 50 years, its exact pharmacological and side-effect mechanisms remain incompletely understood. The major limitation of bleomycin is the risk of pulmonary toxicity which can be diverse, and potentially fatal in 10% of patients. (1,2) The diagnosis of bleomycin lung toxicity (BILI) is the diagnosis of exclusion of other pulmonary diseases. The optimal treatment for bleomycin lung toxicity is not been established and no clinical trials have been performed. Here we present a case report of successful treatment with nintedanib in a patient with BILI. A 37-year-old man had a history of a mild form of COVID-19 and was recently treated with chemotherapy (bleomycin-cisplatin-etoposide) for testicular carcinoma after orchidectomy. Fifteen days after the third chemotherapy cycle patient was admitted to the hospital due to right-sided hydropneumothorax and respiratory insufficiency. Chest CT revealed bilateral subpleural consolidates with ground-glass opacities. BILI was suspected and methylprednisolone (1 mg/kg) was initiated along with oxygen and supportive therapy, resulting in transient clinical improvement. Glucocorticoid therapy was gradually de-escalated but at lower doses, dyspnea progressed and the patient was hospitalized again and transferred to our hospital. Pulmonary embolism was excluded, radiologically there was a progression of consolidates and traction

bronchiectasis. Pulse glucocorticoid therapy and oxygen therapy were induced, but with a poor clinical and radiological response. Considering the aforementioned, we decided to induce nintedanib in the daily dose of 300 mg. After six months of nintedanib therapy, there was a clinical improvement, and oxygen therapy was reduced (the patient is using it only during exercise), with good radiological regression.

Bleomycin is used for the treatment of neoplasms that commonly affect young patients who have a chance to survive for long periods. The prevention, early diagnosis, and management of bleomycin pulmonary toxicities are essential, clinical trials are needed in this area.