中文題目：肺部鱗狀細胞癌接受 Nivolumab 後併發乾癬

英文題目：Psoriasis after nivolumab therapy in a patient with squamous cell carcinoma of lung

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Introduction:

Lung cancer is the leading cause of cancer-related mortality worldwide. Most of lung cancer are classified as Non-small cell lung cancer(NSCLC). Immune checkpoint inhibitors(ICPis) have become integradted into the treatment of such patient, which are novel agents approved for the treatment of late stage NSCLC. Despite its important clinical benefits, ICPis is associated with a spectrum of side effects known as immune-related adverse events(irAEs). Skin toxicitis are the most frequent irAEs. We report a patient with advanced stage lung squamous cell carcinoma presenting with nivolumab induced psoriasis.

Case presentation:

A 73 year-old male with smoke history for 30 years was evaluated for hemoptysis for 1 month. He also had yellowish sputum, dyspnea on exertion and weight loss. Chest x ray showed a mass lesion over left hilar region. Chest CT revealed a left lower lobe mass lesion encasing decending aorta. Endobronchial ultrasonography and tumor biopsy was underwent and revealed squemous cell carcinoma with immunohistochemical features of p40-negative, TTF-1-negative, ALK D5F3-Negative, ROS1-negative. There was no signs of metasitasis in Brain MRI and Positron emission tomography-computed tomography. The final diagnosis was left lower lung squemous cell carcinoma, cT4N0M0, stage IIIA. Neo-adjuvant therapy with cisplatin, docetaxel, and nivolumab was prescribed 3 cycle base on CheckMate 816 trial[1]. After 3 cycle neo-adjuvant therapy, unoperable was told by operator according to follow-up chest CT. So, we arrange adjuvant CCRT with cisplatin, docetaxel and radiotherapy for 2 cycles. Then, we shift the therapy to consolidation Durvalumab based on PACIFIC trial[2].

In the duration of neo-adjuvant therapy, skin scaly erythematous patches was complained. The skin lesion was over bilateral legs and back and it progress gradaully. He was evaluated by dermatology and psoriasis was diagnosed. The psoriasis still progressed gradually after we discontinued nivolumab. So, we prescribed topical steroids with oral antihistamines for psoriasis. As time passed, the psoriasis gradually subsided. Now, we keep consolidation durvalumab therapy for his advanced stage left lower lung squamous cell carcinoma.

Discussion:

Withing the past several years, ICPis targeting programmed cell death protein 1 (PD-1)/programmed death-ligand 1 (PD-L1) and cytotoxic T-lymphocyte-associated protein-4 (CTLA-4) have demonstrated exceptional anti-tumor activity in numerous solid and hematologic malignancies, resulting in marked survival benefits[3]. Despite the clinical benefits of the ICPis, its use is associated with a spectrum of side effects. The side effects may involve any organ or system of the body and cutaneous irAEs are the most common side effect[4]. Dermatologic toxicity, include skin rash, pruritus, lichenoid, eczematous, bullous dermatitis, and psoriasis, is reported in up to 71.5% of patients taking ICPis[3]. The median time to onset of skin toxicities is 4 weeks, but can range broadly from 2 to 150 weeks[3].

There are some case reports of ICPs induced psoriasis in late-stage malignancy. A history of psoriasis is the main risk factor to develop psoriasis with anti-PD1 and anti-PDL1. However, history of psoriasis is not necessary for this condition to occur. The timeline to develop psoriasis was shorter if the patients had previous psoriasis[5,6].

We report a patient with advanced stage lung squamous cell carcinoma presenting with nivolumab induced psoriasis. The psoriasis subsided after topical steroid and oral antihistamines.

The American Society of Clinical Oncology (ASCO) established a grading system, which guides management of cutaneous manifestations based on the percent of body surface area (BSA) involvement and additional symptoms[3]. However, a revised system was proposed by a review[7]. It emphasize that the severity of the reaction should not be graded based on BSA involvement alone, but rather on the nature of the primary cutaneous pathology. For example, maculopapular eruptions rarely affect <30% BSA and can often be managed conservatively, while Steven-Johnson Syndrome affecting even 5% BSA should be managed aggressively. The goal is for early identification of cutaneous complications and concurrent management to minimize treatment interruptions. Most importantly, dermatologists should be involved early and should be working together with oncologists to optimize the management of these patients.

Conclusion:

There are some case reports of ICPs induced psoriasis in late-stage malignancy. Although many cutaneous irAEs can be treated without permanent discontinuation of therapy, irAEs can contribute to treatment noncompliance, discontinuation, or dose modification. Therefore, early identification and symptomatic or systemic management are important to enhance compliance, treatment continuation, and therapeutic efficacy.