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Case Report

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VITILIGO AFTER TREATMENT WITH PEMBROLIZUMAB IN A PATIENT WITH METASTATIC BRONCHOPULMONARY ADENOCARCINOMA: A CASE REPORT WITH REVIEW OF THE LITERATURE

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ABSTRACT

Vitiligo has been reported in 2% to 8.3% of patients followed for melanoma. Other studies have reported the rarity of this event, especially in patients followed for other metastatic cancers. We report a rare case of vitiligo which occurred in a 67-year-old patient followed for metastatic bronchopulmonary cancer treated with immunotherapy such as Pembrolizumab. Vitiligo occurring with the use of pembrolizumab in bronchopulmonary cancer has been exceptionally reported in the literature. Immunotherapy in bronchopulmonary cancer is associated with many side effects, vitiligo is very rare in this context and can have an impact on the quality of life of patients.

KEYWORDS: Vitiligo, Pembrolizumab, Bronchopulmonary cancer, Case report.

INTRODUCTION

Vitiligo has been reported in 2% to 8.3% of patients followed for melanoma.[1] Other studies have reported the rarity of this event, especially in patients followed for other metastatic cancers.[2,3]

Vitiligo occurring with the use of pembrolizumab in bronchopulmonary cancer has been exceptionally reported in the literature.

We report a rare case of vitiligo which occurred in a patient followed for metastatic bronchopulmonary cancer treated with immunotherapy such as Pembrolizumab.

CASE REPORT

This is a 67-year-old patient with a history of smoking cessation 10 years ago. The onset of symptoms dates back to 2019 with the installation of apersistent cough, chest pain, hemoptysis of low abundance, all evolving in a context of deterioration of the general condition.

Clinical examination finds a patient aware, hemodynamically and respiratory stable, with digital hippocratism, the pleuropulmonary examination finds a right basal condensation syndrome, the rest of the examination is unremarkable.

The biopsy performed under bronchial endoscopy was in favor of a bronchial adenocarcinoma.

The reference PET SCAN objectified pulmonary and bone hypermetabolic foci in favor of secondary locations.

Molecular biology was in favor of absence of EGFR mutation, absence of translocation of the gene ALK and absence of detection of ROS1 rearrangement, with PDL1 expression estimated at 96%.

The patient was put on Pembrolizumab at a dose of 200 mg every 21 days, he received 3 cycles.

The evaluation after the third course was in favor of a complete response on the metastases and a partial response to 50% on the primary one.

After the fourth treatment, the patient developed hyperthyroidism with return to euthyroidism.

After the eighth treatment, the patient developed vitiligo in the face (Figure 1 A and B) and forearm (Figure 2).

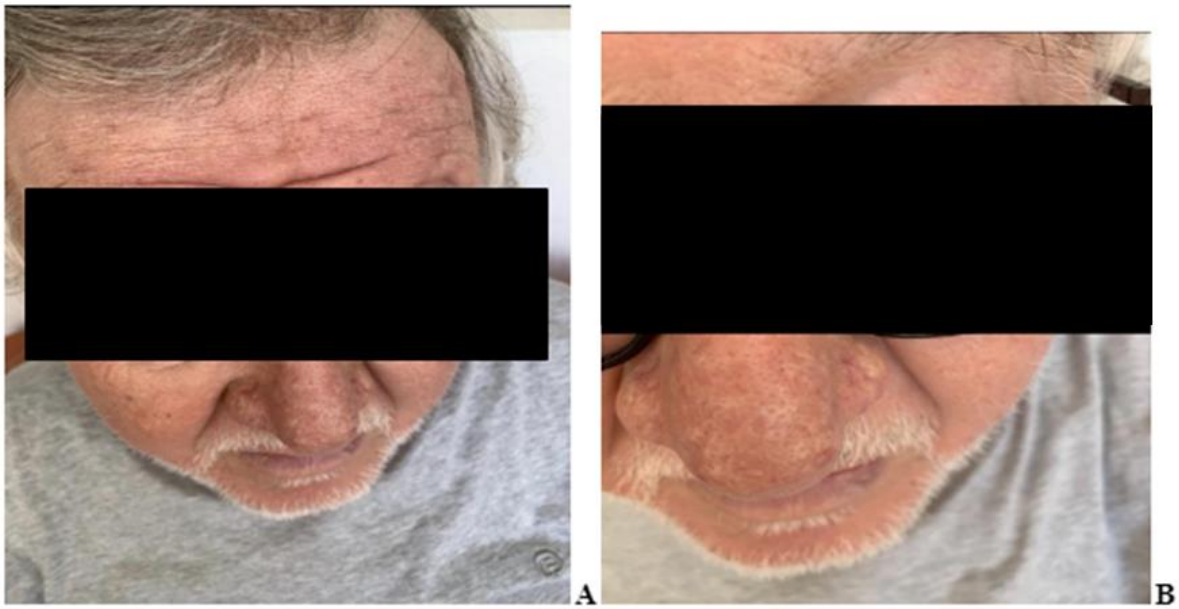

Figure 1: A, B: Clinical appearance of the face showing vitiligo after treatment with anti-PD1 immunotherapy.

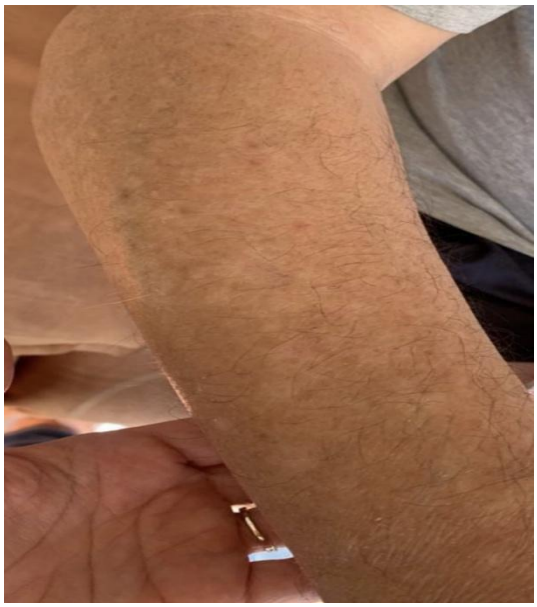

Figure 2: Paraneoplastic depigmentation vitiligo type in the forearm.

DISCUSSION

Vitiligo has been reported in 2% to 8.3% of patients followed for melanoma.[1] Other studies have reported the rarity of this event, especially in patients followed for other metastatic cancers.[2,3] Immunotherapy-induced vitiligo has been reported in a patient with chronic myelogenous leukemia.[4,5] and another case in a patient followed for hepatocellular carcinoma.[6]

Nivolumab-induced vitiligo in bronchopulmonary cancer has been described in several studies.[3,6,7,8]

However, vitiligo occurring with the use of pembrolizumab in bronchopulmonary cancer has been exceptionally reported in the literature.

Immunological checkpoints modulate or limit the activation and proliferation of T lymphocytes and promote the expression of regulatory T cells (Tregs). They thus allow tolerance vis-à-vis antigens of the self but also vis-à-vis the tumor cells of some cancers.[9,10] Their therapeutic inhibition directs the immune system towards an anti-tumor action, by activation of cytotoxic CD4 + / CD8 + T lymphocytes.

Due to their very specific mechanism of action, immunological checkpoint inhibitors are associated with a very specific tolerance profile, which differs significantly from that of chemotherapies or targeted therapies. The toxicity observed is primarily immunological, mediated by the reactivation and proliferation of T lymphocytes.[4]

The use of anti-PD-1 immunotherapies has improved the prognosis of metastatic cancers but is associated with significant side effects. Skin side effects are frequent and the occurrence of vitiligo is estimated in 25% of patients.[11]

Vitiligo is a skin disorder characterized by loss of color, an autoimmune disease of the skin that causes destruction of melanocytes and loss of skin color.

The extent of the lesions can have a significant impact on the quality of life. The long-term outcome after stopping immunotherapy is not yet well known.[12]

CONCLUSION

Immunotherapy has changed the prognosis of bronchopulmonary cancer but it is associated with many side effects, vitiligo is very rare in this context and can have an impact on the quality of life of patients.

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