SKIN CANCER (OTHER THAN MELANOMA)

THE USE OF PD-1 INHIBITORS FOR LOCALLY ADVANCED AND METASTATIC NON-MELANOMA SKIN CANCER

L Chen [1] - S Silapunt [1] - M Migden [2]

University Of Texas Mcgovern Medical School At Houston, Department Of Dermatology, Houston, United States [1] - The University Of Texas Md Anderson Cancer Center, Departments Of Dermatology And Head And Neck Surgery, Houston, United States [2]

Introduction: Non-melanoma skin cancer (NMSC) is the most common cancer diagnosis in the United States. Checkpoint inhibitors such as programmed cell death-1 (PD-1) inhibitor have emerged as an effective agent against many types of cancer. NMSCs express tumor-associated antigens that elicit tumor-specific response, making them excellent candidates for immunotherapy.

Objective: The objective of this study was to conduct a review of the use of PD-1 inhibitors such as pembrolizumab, nivolumab and cemiplimab for the treatment of locally advanced and metastatic NMSCs refractory to surgical intervention.

Materials and Methods: We conducted a PubMed literature search up to October 1st, 2018 using the terms “non-melanoma skin cancer (NMSC)”, “basal cell skin carcinoma (BCC)”, “cutaneous squamous cell carcinoma (cSCC)”, “programmed cell death-1 inhibitors”, “pembrolizumab”, “nivolumab” and “cemiplimab”. Relevant papers and previous reviews of the subject were reviewed.

Results: Fourteen papers, including a phase 1 and a pivotal phase 2 studies, were found to match our search criteria, with a total of 122 patients. These patients underwent treatment with pembrolizumab, nivolumab, or cemiplimab for locally advanced or metastatic cSCC or BCC. Half of the patients (61/122) responded to therapy with many others demonstrated stable disease. The side-effect profile of the above studies was similar to what was previously reported for immune checkpoint inhibitors, with rash and fatigue being the most commonly reported adverse events.

Conclusion: Patients with locally advanced, metastatic NMSCs continue to have a significant disease burden with limited available treatment options. PD-1 inhibitors have emerged as a promising treatment option for various types of cancer. Future studies are necessary to optimize the treatment response of patients receiving PD-1 inhibitor therapy by identifying key biomarkers, finding a solution to overcome treatment resistance, and

exploring possibilities of combination therapy.