



Case Report: Eruptive keratoacanthomas associated with Pembrolizumab

Pembrolizumab is an immune checkpoint inhibitor anti-PD1 (Anti-programmed Cell Death-1) drug approved for metastatic melanoma, non-small cell lung cancer and head and neck squamous cell carcinoma (SCC). Most adverse effects of anti-PD1 drugs are immune-related. Approximately 40% of patients treated with anti-PD1 develop cutaneous toxicity. Eruptive keratoacanthomas (KA) have been reported as a rare side effect of anti-PD1(1). We present a case of a 73-year-old male who presented with rapidly progressing cutaneous lesions after 12 weeks of pembrolizumab for stage IV lung cancer. He had pink plaques on his lower limbs and forearms, having had only mild improvement with topical corticosteroids. The largest keratotic papule on the lower leg was excised, confirming well-differentiated SCC. Four months later, lesions were increasing in both size and number. Three punch biopsies confirmed well-differentiated SCCs. With a clinical diagnosis of eruptive KAs secondary to pembrolizumab, he commenced acitretin 30 mg daily. One month later he was hospitalised for lower limb cellulitis; pembrolizumab was ceased temporarily and acitretin continued. Subsequently he developed extensive bullous pemphigoid requiring oral prednisone. Keratinocytic tumours but eruptive KAs are rare with anti-PD1 and few cases have been reported, most of them regressing spontaneously or after treatment with topical and/or intralesional corticosteroids, cryotherapy, curettage and imiquimod. Although not statistically significant, it has been reported that patients undergoing anti-PD1 therapy develop more SCCs than controls, hypothesising that immunosuppression may play a more relevant role. Paradoxically, pembrolizumab is also used to treat metastatic or locally advanced SCCs with promising results.

References

1. Antonov NK, Nair KG, Halasz CL. Transient eruptive keratoacanthomas associated with nivolumab. *JAAD Case Rep.* 2019;5 (4):342–5.
2. Zhao CY, Hwang SJE, Anforth R, Carlos G, Chou S, Carlino M, Fernandez-Penas P. Incidence of Basal Cell Carcinoma and Squamous Cell Carcinoma in Patients on Antiprogrammed Cell Death-1 Therapy for Metastatic Melanoma. *J Immunother.* 2018 Sep;41(7):343–349.