Talimogene Laherparepvec for Nonmelanoma Skin Cancer

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Talimogene laherparepvec (T-VEC) is a type of local immunotherapy that uses a genetically modified virus that can target and destroy cancer cells, causing both a local and systemic immune response. It is administered as an injection into the skin cancer lesion. T-VEC is currently approved by the FDA for the treatment of advanced melanoma, and has shown promising effects both alone and in combination with other immunotherapies.

Because of the success of T-VEC in melanoma treatment, its use in nonmelanoma skin cancers (NMSC), including Merkel cell carcinoma (MCC) and cutaneous squamous cell carcinoma (SCC) is presently under investigation. To date, there are few phase III clinical trials evaluating the efficacy of T-VEC for NMSC, but successful off-label use has been reported in the literature.

MCC is an aggressive type of skin cancer that typically presents on sun-exposed areas in the elderly. In one study, four patients with regionally advanced MCC were treated with T-VEC, all of whom achieved a durable and complete response without severe side effects. Importantly, treatment with T-VEC prevented distant metastasis in all patients. Another study analyzed the combination of T-VEC and another type of immunotherapy using an inhibitor to target PD-1/PDL-1 in two patients with MCC that did not previously respond to radiotherapy, chemotherapy, or anti-PD1 therapy. The T-VEC and PD-1/PD-L1 inhibitor combination therapy led to a complete response in one patient and a near-complete response in the other.

Cutaneous SCC is a type of skin cancer that has a wide spectrum of presentations, ranging from low-risk localized disease to high-risk metastatic disease. In a phase II trial investigating the use of T-VEC in treating low-risk invasive SCC, all seven patients achieved an overall complete response. The average time to respond to treatment with T-VEC was 43 days.

The most commonly reported side effects of T-VEC are flu-like symptoms, including fevers, mild fatigue, and nausea, and ulceration at the site of injection. Overall, T-VEC is well-tolerated by patients. If you develop any new rashes or lesions after starting T-VEC, you should report this to your doctor.

T-VEC is reserved for patients with functioning immune systems and non-pregnant patients. This therapy is contraindicated in patients with deficient or compromised immune systems, including those with blood cancers, active herpetic infection, or HIV, or those taking steroids, acyclovir, or valacyclovir. Because of the risk for graft rejection, organ transplant recipients have been excluded from clinical trials, so additional data is needed to evaluate the utilization of T-VEC in this patient population.

References

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