

Non-Invasive Treatment of Invasive Squamous Cell Carcinoma of the Head or Neck

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INTRODUCTION

Non-melanoma skin cancer represents the most common malignancy in the United states, and the incidence is increasing. In the United States alone, average annual treatment costs are in the billions.1 Although basal cell carcinoma (BCC) is considered the most common skin cancer, recent studies suggest the incidence of squamous cell carcinoma (SCC) has increased creating a SCC:BCC ratio of 1:1.2 Squamous cell carcinoma is a keratinocyte cancer that most frequently occurs on sunexposed areas of the skin, such as the head and neck. Many treatment modalities are used for SCC including Mohs micrographic surgery, but there are currently no FDA-approved topical therapies for invasive SCCs. The Mohs micrographic surgery appropriate use criteria (AUC)³ is an algorithm that aids clinicians in determining when surgery is appropriate based on a score that takes into consideration the type of skin cancer, location, size and health status of the patients. Our objective was to determine the treatment outcomes of patients with Mohs appropriate SCC of the head and neck using topical combination therapy.

METHODS

comprehensive obtained retrospective chart review to determine the 3-year cure rate for all biopsy proven SCCs diagnosed and treated with a topical regimen. This data set included 156 SCCs treated in this manner, consisting of 83 patients with SCC in situ (SCCIS) and 73 with invasive SCC. We selected patients with invasive SCC of the head and neck, who met the Mohs appropriate use criteria, yet were treated with topical therapy. The topical regimen consisted of tretinoin 0.1% cream and imiquimod 5% cream applied simultaneously under occlusion 5 times a week for 30 treatments. The primary outcome was clinical cure of the tumor 3 years after completing the topical regimen.

SCC (156 patients)

SCCIS (83 patients)

Invasive SCC (73 patients)

Tumors of the head or neck treated with topical regimen (6 patients)

Clinical Cure (5 patients)

Treatment Failure (1 patient)

RESULTS

Of the 73 patients with invasive SCC, a total of 6 patients were selected from the data who met the inclusion criteria of having a Mohs appropriate tumor on the head and neck. In 5 of these 6 patients treated with the topical regimen, there was clinical cure of the invasive squamous cell carcinoma and lack of recurrence after a minimum of three years of follow-up. Side effects experienced by these patients were limited to discomfort and burning pain, yet all patients were able to tolerate therapy for the duration of the treatment.









CONCLUSION

These data suggest that combination topical therapy with tretinoin 0.1% and imiquimod 5% cream could potentially be considered a safe, effective and readily available therapy for invasive SCCs in select patients who prefer non-invasive options or are poor surgical candidates.

REFERENCES

- 1. Guy GP, Jr., Machlin SR, Ekwueme DU, Yabroff KR. Prevalence and costs of skin cancer treatment in the U.S., 2002-2006 and 2007-2011. *Am J Prev Med.* 2015;48(2):183-187.
- 2. Rogers HW, Weinstock MA, Feldman SR, Coldiron BM. Incidence Estimate of Nonmelanoma Skin Cancer (Keratinocyte Carcinomas) in the U.S. Population, 2012. *JAMA dermatology.* 2015;151(10):1081-1086.
- 3. American Academy of D, American College of Mohs S, American Society for Dermatologic Surgery A, et al. AAD/ACMS/ASDSA/ASMS 2012 appropriate use criteria for Mohs micrographic surgery: a report of the American Academy of Dermatology, American College of Mohs Surgery, American Society for Dermatologic Surgery Association, and the American Society for Mohs Surgery. *Dermatologic surgery: official publication for American Society for Dermatologic Surgery.* 2012;38(10):1582-1603