cutaneous clue of DM by obtaining cutaneous biopsy samples within the SD-distributed areas for histopathologic examination.

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Conflicts of interest

None disclosed.

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Intralesional 5-fluorouracil for the treatment of squamous cell carcinomas

To the Editor: The standard treatment for squamous cell carcinomas (SCCs) is wide local excision or Mohs micrographic surgery. Excision of SCCs in difficult areas, such as the lower extremity, can be challenging and associated with increased complications.[1] Intralesional 5-fluorouracil (IL5-FU) is a minimally invasive therapeutic option that may benefit select patients for whom surgical excision is not desired or feasible. Most studies to date have been limited to small studies, case series, and recent case reports.[2-4] This study evaluated the efficacy of IL5-FU in the treatment of cutaneous SCC.

A retrospective cohort study was performed by reviewing patient records at a multispecialty, multisite, private practice group from January 1, 2010, through April 1, 2019. Records for adult patients were retrieved using *International Classification of Diseases* 9th and 10th Revision codes for the administration of 5-FU. The initial encounter was defined as the date the IL5-FU was administered, and a follow-up date was defined as the last clinical encounter. The Campbell University Institutional Review Board approved the study protocol.

Patients received 1% lidocaine with 1:100,000 epinephrine for local anesthesia before the IL5-FU injection. A 27 to 30-gauge needle was used to intradermally inject 5-FU at a concentration of 50 mg/mL. The volume administered ranged from 0.2 mL to 2 mL per lesion until blanching or visible diffuse infiltration occurred (Table I).

Patients were monitored most commonly at 4 weeks. If the lesion was still present at the follow-up visit but clinically responding, repeat injections were considered. If no response was

Table I. Treatment dosing and lesion characteristics

Variable	Value (N = 172 lesions treated)
Dose per lesion, median (range), mg	50 (10-100)
Maximum dose per patient per day, mg	150
Anatomic location, No. (%)	
Head and neck	29 (17)
Trunk	24 (14)
Upper extremities	55 (32)
Lower extremities	64 (37)
Lesions treated per patient, mean (SD), No.	1.23 (0.62)
Follow-up duration, mean (SD), mo	11.69 (9.84)
Median follow-up duration, mo	9.5 (1-40)
Treatments per lesion, mean (SD), No.	1.25 (0.51)

No., Number; *SD*, standard deviation.

Table II. Adverse event details

Adverse event	No.	Treatment details	Details (event No.)
Discoloration, hyperpigmentation	1	No treatment	Improved at 4 months without treatment
Local erythema, scaling, tenderness	2	Topical clobetasol for 2 weeks and discontinued Topical petrolatum and occlusion (2) Topical triamcinolone for 2 weeks and discontinues	Resolved by 1 month follow-up (1) Resolved by 1 month follow-up (2)
Headache, dizziness, nausea	1	No treatment	Occurred on day of injection. Resolved within 48 hours.
Localized pruritus with or without erythema	2	No treatment	Resolved by 1 month follow-up (1 and 2)
Injection site infection	1	Cephalexin for 7 days	Clinically diagnosed infection at site of injection. Resolved with treatment.

No., Number.

seen at follow-up, repeat injection or surgical management were considered.

We identified 148 patients with 172 SCCs treated with IL5-FU. Seven SCCs were identified as SCC-keratoacanthomas subtype and 165 were identified as invasive SCC. Of the 172 SCCs, 170 were <2 cm in diameter. The cohort comprised 93 men (63%) and 55 (37%) women. No pregnant women or women of child bearing age were eligible to receive this therapy at the time of evaluation and were inherently excluded from the study. The patients were an average age of 74.5 years.

The most common treated location was the lower extremity (37%). Of the 172 SCCs treated, 158 (92%) were clinically resolved after treatment, with 24% requiring at least 1 repeat treatment before resolution. Of the 14 lesions that did not respond, 12 were treated surgically, and 2 were lost to follow-up. Among the lesions that demonstrated clinical resolution, there was 1 recurrence of a keratoacanthoma, which was treated surgically. Adverse events occurred in 5 patients and were mostly limited to local injection site reactions; however, 1 patient did experience a headache, dizziness, and nausea (Table II).

To our knowledge, this is the largest study to date to evaluate the efficacy of IL5-FU in the treatment of SCC. IL5-FU appears to be an effective minimally invasive treatment for SCCs. In addition to high efficacy and few adverse events, IL5-FU is a cost-effective treatment for select patients.[5] This treatment option can be considered based on anatomic location (eg, lower extremity), surgical candidacy, functional status, tumor burden, and patient preference.[4]

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