SHORT COMMUNICATION

Field Cancerization Treatment with Tirbanibulin 1% Ointment: Results in Real-world Practice

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The concept of cutaneous cancerization field refers to the area of skin that has suffered chronic actinic damage and in which there are actinic keratoses (both clinically evident and subclinical lesions) that can evolve into squamous cell carcinoma (1). Different physical and pharmacological therapies are available to control the cancerization field and reduce the risk of tumour development. Therefore, the choice of treatment will depend on the clinical criteria and adaptation to the patient's needs. The most novel treatment for cancerization field is tirbanibulin, with a different mechanism of action, inhibiting both tubulin polymerization and Src kinase signalling. Although its usefulness is supported by clinical trials, there are few publications on experience in real clinical practice.

MATERIALS AND METHODS

We conducted a retrospective study in which we included all patients with cancerization field from our department treated with tirbanibulin 1% ointment from its commercialization in November 2022 until November 2024. Patients over 18 years of age with Olsen grade I actinic keratosis of the scalp and facial regions were included. Treatment was performed once daily for 5 days on a skin area of up to 25 cm^2. Patients who did not undergo treatment correctly or who were lost to follow-up were excluded from the analysis. The response was evaluated on day +90 by clinical observation to assess lesion reduction (papules and/or erythema). Response was considered complete when all lesions disappeared, and partial when there was a reduction in the number of lesions. Adverse events were evaluated according to local skin reactions (LSR) score, assessing the presence of irritation of the skin, erosions, ulcerations, oedema, crusting, and itching.

Epidemiological variables (age and sex) and clinical variables (location of lesions, previous treatments, local reaction, and response to treatment) were analysed. The variables were grouped in an Excel 2011 table for Macintosh (Microsoft Corp, Redmond, WA, USA), and statistical analysis was subsequently performed using the JMP Pro program (https://www.jmp.com/en/software/predictive-analytics-software). Continuous quantitative variables were evaluated using their real numerical values, with the mean and standard deviation as representative values. Qualitative variables, distributed into 2 or more categories depending on the case, were evaluated by studying the corresponding counts and frequencies. For the inferential analysis, Student's *t*-test was used, with $p < 0.05$ considered statistically significant.

RESULTS

A total of 48 patients were included: 35 men (72.9%) and 13 women (27.1%), with a mean age of 72.92 ± 10.39 years. Of the treated areas, 58.3% were on the scalp, 18.8% cheeks, 12.5% nose, and 10.4% forehead. The rest of the demographic data are presented in **Table I**.

Table I. Patients' demographic data

Variable	
Age, years, mean ± SD	72.92 ± 10.39
Sex, *n* (%)	
Male	35 (72.9%)
Female	13 (27.1%)
Location, *n* (%)	
Scalp	28 (58.3%)
Cheeks	9 (18.8%)
Nose	6 (12.5%)
Forehead	5 (10.4%)
Previous treatments, *n* (%)	
0–1 therapies	33 (68.8%)
No previous treatments	18 (37.5%)
Cryotherapy	13 (27.1%)
Diclofenac	1 (2.1%)
5-fluorouracil	1 (2.1%)
2 or more therapies	15 (31.3%)
Cryotherapy+diclofenac	4 (8.3%)
Cryotherapy+5-fluorouracil	2 (4.2%)
Cryotherapy+photodynamic therapy	4 (8.3%)
Cryotherapy+imiquimod	1 (2.1%)
CT+5FU+PDT	4 (8.3%)

SD: standard deviation; CT: cryotherapy; 5FU: 5-Fluoruracil; PDT: photodynamic therapy.

Clearance of the lesions was achieved in 70.8% of patients, 18.8% had partial clearance, and 10.4% had no response (**Fig. 1**). Most patients had good tolerance to treatment, with 12.5% having mild local reactions and only 1 patient having an intense local reaction.

In the inferential study, no statistically significant differences were found in terms of treatment response when comparing age, sex, or local reaction. However, a

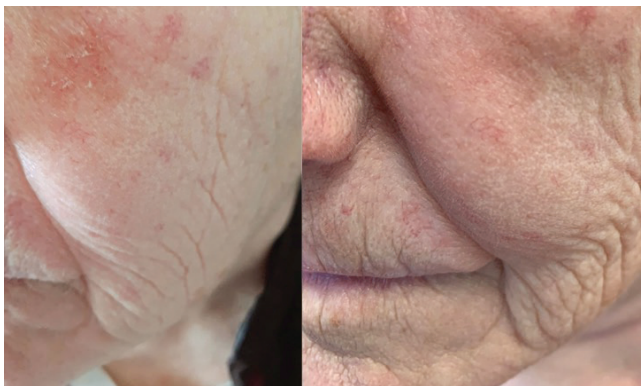

Fig. 1. Patient with field cancerization in left cheek. Complete clearance after therapy with tirbanibulin 1% ointment.

statistically significant relationship was detected between the response to treatment and the number of previous treatments undergone by the patients; thus, there was a higher response rate in those patients who had undergone 1 or no previous treatment (**Table II**).

DISCUSSION

Field cancerization treatment is a challenge in daily clinical practice. Treatment decreases the number of lesions and thus controls the risk of development of squamous cell carcinoma. However, sequential and/or combined treatments are required to achieve prolonged results, and follow-up of these patients is mandatory to detect the early development of neoplasms. According to different meta-analyses, the molecules that show most evidence of being effective for field cancer treatment are 5-fluorouracil and imiquimod (2).

Tirbanibulin is a new molecule with a different mechanism of action from previous treatments. Inhibition of tubulin polymerization disrupts the microtubule network, with antiproliferative, antitumour, and pro-apoptotic effects. This disruption interferes with cell signalling pathways, including those that regulate Src expression and trafficking (3). Its efficacy is supported by phase III clinical trials with lesion clearance rates of more than 50% (4). Furthermore, different meta-analyses position tirbanibulin 1% as an effective treatment for actinic keratoses, with a good safety profile and the advantage of offering a short treatment period (5).

Table II. Data for tirbanibulin 1% ointment treatment

Variable	
Clearance rate, *n* (%)	
Complete	34 (70.8%)
Partial	9 (18.8%)
No clearance	5 (10.4%)
Adverse events, *n* (%)	
None	41 (85.4%)
Mild	6 (12.5%)
Severe	1 (2.1%)
Response to treatment, *n* (%)	
Sex	
Male	
No response	5 (14.3%)
Response	30 (85.7%)
Female	
No response	0 (0%)
Response	13 (100%) NS
Adverse event	
No	
No response	4 (9.8%)
Response	37 (90.2%)
Yes	
No response	1 (14.3%)
Response	6 (85.7%) NS
Previous therapies	
0-1	
No response	1 (2.9%)
Response	33 (97.1)
2 or more	
No response	4 (28.6%)
Response	10 (71.4%) ($p = 0.021$)

NS: not significant.

Different studies on the use of tirbanibulin in real-world practice have concluded that it is an effective treatment with few adverse effects. Campione et al. included 30 patients and obtained a complete response rate of 70% and a partial response rate of 30%, with an incidence of adverse effects of 13.33% (7). The study by Li Pomi et al. included 38 patients, showing a slightly lower complete response rate (51%), with erythema being the most frequent skin reaction and no evidence of other adverse effects such as crusting, swelling, pustulation, or erosion (6). In contrast, Mansilla-Polo et al. showed a complete response rate of 24%, although there was a high average satisfaction rate with a total of 25 patients in their study (9). Kirchberger et al. included 30 patients and reported a reduction in the mean AKASI from 5.6 prior to treatment to 1.2. post-treatment (8). Moreover, treatment safety has been observed in transplant patients (6–10). Although it is used in cancerization fields of up to 25 cm^2 in the scalp and facial region, there is increasing evidence of its usefulness in larger areas and other locations such as the upper limbs (11, 12).

Our study is a real-world practice that demonstrated a higher complete clearance rate than others (70.8%). Moreover, we detected a higher response rate in patients who received tirbanibulin as the first- or second-line treatment. As with other diseases, the use of a drug as a third or fourth option may result in lower efficacy. This was probably due to the presence of more treatment-resistant lesions or the selection of more aggressive tumour clones. Therefore, naive patients would benefit more from this novel treatment.

In summary, as pointed out in other similar studies, the results obtained suggest that tirbanibulin 1% ointment is an effective and safe treatment, highlighting that the patients who obtained the highest response rate were those in whom tirbanibulin was used as the first or second choice. Further studies are required to prove the effectiveness and safety of tirbanibulin 1% in real-world clinical practice.

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