CASE REPORT

Intralesional bleomycin in the treatment of recalcitrant warts

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INTRODUCTION

Warts are benign epidermal proliferative lesions, caused by the Human Papilloma Virus (HPV) infection, which exists in more than 100 serotypes, affecting the skin and mucosal surfaces of children and adults. They are clinically defined as raised lesions, hyperkeratotic, wart-like or vegetant, and are classified according to a variety of morphologies, histologies and anatomical locations. In the skin, one can find flat, common, palmoplantar and 'mosaic' warts. In mucosal surfaces, genital or oral warts are identified. The virus is spread according to several factors, such as the location of the lesion, the virus load and serotype, type of contact and the host's immune status.[1,2,3]

The most common subtypes in the palmoplantar region are 1, 2, 4, 27 and 57. HPV-1 is most dominant in patients younger than 12 years old, HPV-2 in palmar warts, and 27 and 57 in plantar warts.

Although nearly 30% of warts demonstrate spontaneous resolution, those who remain may cause cosmetic discomfort, pain or irritation caused by trauma. Consequently, there are distinct therapeutic surgical options to eliminate warts, which show variable results and common recurrence: electrocauterization, cryosurgery and laser. Despite all of these, there is no treatment demonstrated to be 100% successful. In the past, it was evidenced that warts, specially periungual and palmoplantar, responded well to intralesional bleomycin treatment, which is now considered as a therapeutic option above all other unsuccessful treatments.[1,2,3,6,7]

Bleomycin is an antibacterial, antiviral and antitumoral agent that inhibits viral and cell DNA synthesis, resulting in acute tumor necrosis. It was isolated from the secretion of the soil fungus Streptomyces verticellus.[1,2] Its application for common warts was suggested since 1970. The process begins with an intradermic infiltration that has a direct cytotoxic effect on keratinocytes and the eccrine conduct, producing an inflammatory reaction, which will posteriorly develop into a hemorrhagic crust (from 2 to 3 days). Approximately after 2 weeks, such crust will fall off, leaving a healthy tissue without scarring. Side effects, such as sores, scars, post-inflammatory hyperpigmen-

tation, ungueal dystrophies and flagellate hyperpigmentation have been reported.[1,2,3]

MATERIALS AND METHODS

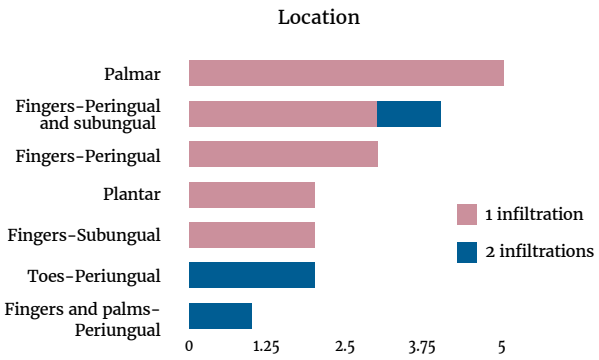
The present study was conducted from July, 2018 to April, 2019 at the surgery department of the Dermatology Center "Dr. Úraga." Nineteen patients, male and female, with multiple periungual and palmoplantar warts were treated. The patients, ages 10 to 80, had not had a positive outcome from conventional treatments. Ampoules of 15 IU of Bleomycin in powder were used. The bleomycin was diluted in 10 ml of 0.9 saline solution and was stored to a temperature of less than 10°C for two months. An insulin syringe was filled with 0.4 ml of lidocaine and 0.6 ml of diluted bleomycin solution, which resulted in a final concentration of 1 IU/ml. Each area of treatment was disinfected with alcohol. Intralesional bleomycin was injected until a 1 mm perilesional white halo was produced. The solution was administered according to the size of the warts. A size of less than 5 mm corresponded to an infiltration of up to 0.10 ml and a size of more than 10 mm required an infiltration of up to 0.20 ml. The dosage administered per session did not surmounted 2 IU. A period of 24 to 48 hours of infiltration resulted in a black sore (fig. a), which afterwards developed into clusters. These fell off after 12 to 15 days, leaving healthy skin without scarring (fig. b, c, d, e). Patients were evaluated after 21 days to reassess the possibility of a second infiltration in the case of presenting residual warts.

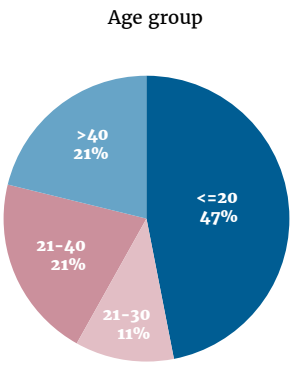
RESULT

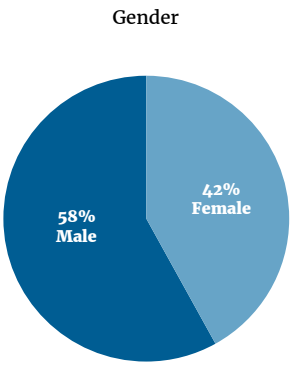
From 19 patients that received treatment, 16 successfully eliminated all warts by infiltration, 4 needed a second infiltration and 3 proved to be resistant to treatment. 2 patients suffered from ungueal dystrophy after periungual infiltration (fig. f).

CONCLUSIONS

Intralesional bleomycin infiltration proved to be an effective and safe therapeutic option, being widely accepted among patients that needed treatment against







periungual and palmoplantar warts. When the infiltration was administered, all patients complained of pain, which subsided spontaneously after a couple of hours. Some studies have reported that the dosage of bleomycin would be administered according to the size of the wart. In our cases, the antitumor agent was applied until a perilesional white halo of 1 mm was produced.

In regard to side effects, two patients presented ungueal dystrophy after periungual infiltration. Other studies have presented a healing rate similar to this case, varying between 50 to 80% of the cases. Furthermore, 30% of those patients also required a second infiltration.[3,8,9]

It is evident that this represents a limited case study in initial phase. Moreover, the hope is to increase the sample size in order to show more definitive results.

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