CASE AND RESEARCH LETTER

[Translated article] Refractory Anogenital Warts: Good Response to Photodynamic Therapy

Condilomas acuminados resistentes a los tratamientos convencionales con buena respuesta a tratamiento con terapia fotodinámica

To the Editor:

Anogenital warts are produced by specific genotypes of human papillomavirus (HPV). Although this condition is benign, its treatment can prove difficult owing to the lack of response, local adverse effects, and frequent recurrences. The mechanism of action of photodynamic therapy (PDT) involves destruction of specific previously sensitized cells and tissues with an exogenous photosensitizer that is activated by light of a given wavelength for an appropriate duration of exposure. The literature provides few data on its use in the treatment of genital warts, and, given that it is applied off-label, no clear guidelines have been prepared.

A 56-year-old man from Peru was evaluated for treatment of several anogenital warts on the penis. He had a long history of pustular psoriasis that had been treated with different drugs both in monotherapy and in combination with other agents (methotrexate, acitretin, ciclosporin, infliximab, etanercept, and ustekinumab), nonalcoholic fatty liver disease, and pulmonary tuberculosis during adolescence that had been treated appropriately.

He had had anogenital warts for 15 years. Biopsy and genotyping revealed HPV subtypes 6, 16, 40, 42, 53, and 61. After the initial diagnosis, the patient had received various local treatments, which, in order of prescription, included podophyllotoxin solution, imiquimod 5% cream, and treatments to which he did not respond: topical cidofovir 1%

for 4 months, with partial but insufficient improvement of the lesions, as well as cryotherapy and sinecatechins, again with no response. The patient then received PDT based on methyl aminolevulinate (2 cycles of 2 sessions), with a minimal clinical response. From then on, treatment was with imiquimod 5% (3 times weekly for 12 weeks); the response was partial although insufficient and temporary. The patient’s psoriasis improved during therapy with imiquimod, thus making it possible to reduce his immunosuppressive treatment (from methotrexate and ustekinumab to ustekinumab in monotherapy). Given the poor response to previous treatments (Fig. 1), a new cycle of PDT was started with 5-aminolevulinic acid at a concentration of 78 mg/g. The incubation time was 3 hours, and the irradiation was then performed with a 365-nm light source for 2 minutes, with a maximum power density of 60 mW/cm². The patient was treated for 4 weeks, after which time the lesion had regressed significantly, with the patient reporting no further outbreaks.

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PDT receives little attention in the literature, and reports are mainly case studies and series. Use of PDT as monotherapy\(^1\) and in combination with other treatments (previous carbon dioxide laser\(^7\), cryotherapy\(^8\), and curettage\(^9\)) is promising, with response rates greater than 70%—in some series all patients achieve complete remission—and a low incidence of recurrence, possibly because this treatment modality also acts on subclinical lesions\(^10\). Nevertheless, these data should be interpreted with caution. In the present case, the fact that the response to treatment came some months after reducing immunosuppressive treatment leads us to believe that the absence of response to the previous treatments (including the first one with PDT) can be explained—at least in part—by the immunosuppression induced by the drugs the patient was taking. Patients with cellular immunosuppression of any cause are more susceptible to diseases induced by various types of viruses. The lesions induced by HPV in particular produce a more florid clinical picture (i.e., more numerous and larger lesions), a diminished response to treatment, and a greater incidence of relapse than in immunocompetent patients. Furthermore, the first application of PDT could have proven insufficient in the present case, since only 2 cycles were administered, compared with the 3 cycles subsequently administered. As this treatment is administered off-label, we do not know if there are differences in efficacy between the 2 photosensitizers currently sold for treatment of anogenital warts.

In the present case, we observed an optimal response to treatment, with no recurrences during the 4 months of follow-up after the end of treatment. We administered local anesthetic to prevent pain during exposure to the light source, and tolerance of treatment was excellent.

In conclusion, PDT could be a safe and effective approach for the treatment of anogenital warts. It is especially useful in immunosuppressed patients with lesions refractory to standard treatment.

**Conflicts of interest**

The authors declare that they have no conflicts of interest with respect to the drug used in the present report.

**References**


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