



Photovaporization with co₂ laser in male genital condylomatosis. about a Case Report 44

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Abstract

Human Papillomavirus infection is a highly prevalent condition worldwide and one of its consequences is external genital warts or condylomas. The treatment of these lesions has traditionally been difficult, due to the high recurrence requiring multiple sections to eliminate them, which has led to the implementation of the use of new technologies, so a case of genital condylomatosis is presented in a 47-year-old male patient, who consulted for multiple condylomatous lesions on the glans that hindered the retraction of the foreskin of 3 months of evolution, photovaporization was performed with Co2 laser in 6 sections with intervals of 3 weeks between it, and after the last section phimosectomy is performed to obtain the desired aesthetic and functional recovery.

Keywords: HPV, Genital condylomatosis, laser photovaporization, Phimosectomy

Introduction

The human papillomavirus (HPV) is a source of significant morbidity and mortality worldwide. High-risk types are associated with 99.7% of all cervical cancers and their intraepithelial lesions, while low-risk types are responsible for almost all cases of genital warts (1). It is considered one of the three most prevalent sexually transmitted infections (STIs), along with chlamydia infection and gonococcal infection (2). Genital warts do not pose a risk of death and some resolve spontaneously. However, they have a high infectivity with a transmission rate of around 65%, with a high frequency of recurrence and the need for multiple treatments. All this speaks of the association with a high burden of disease, from the economic and psychosocial point of view, which generates a reduction in the quality of life of patients (3).

Since there is no antiviral treatment to date that is 100% effective for HPV, the role of the physician is to treat all clinical lesions to help the patient's immune system fight against the virus and prevent transmission, since HPV is known to be transmitted by contact with lesions. These procedures can be divided into chemical, surgical, and immunity-boosting, Revelo, 2013 (4)

HPV lesions are classified as high or low risk, based on their oncogenic potential. HPV infection is highly prevalent, more than 50% of sexually active people will be infected at least once in their lifetime, the persistence of the infection is high risk and creates a suitable environment for the development of cancer. Multiple infections increase the risk of persistence of the infection and consequently of cytological abnormalities, González and Núñez, 2015 (5)

Treatments for HPV infection do not definitively cure this viral infection, all of them being long, ineffective and with a high rate of recurrences. The patient, despite fatigue and recurrences, it is imperative to use new technologies that minimize recurrences and obtain the best aesthetic results. The CO2 laser emits a wavelength in the infrared spectrum of 10,600 nm, with the total absorption of the energy high density powers can be obtained in small volumes of tissue, which is vaporized. A CO2 laser beam around 0.1mm in diameter is suitable for cutting fabric, while a blurred beam and around 2mm in diameter will vaporize the fabric, Revelo, 2013 (4)

Other researchers in the field have stated that the use of CO2 laser is currently accepted as an effective treatment for cervical intraepithelial neoplasia, CarrilloPacheco, et al., 2012 (6). Likewise, these new

techniques are being used as cutting-edge technology, making great advances and reducing the costs of ineffective treatments and generating greater benefits for patients, Biglia, et al., 2015 (7).

The training in the use of lasers, whether to vaporize (eliminate or disappear), cut (like a scalpel) and coagulate (eliminate bleeding from the vessels), has the following purposes: a) to know and promote the use of the 15 ww CO₂ laser in patients who come to the gynecology consultation for the treatment of pathology of the lower genital tract; b) to reduce the recovery time of treated patients; c) to contribute to reducing costs in less ineffective treatments, Hilario, 2009 (8).

Therefore, the purpose of this clinical case is to demonstrate the usefulness of CO₂ Laser as a biopsy instrument and laser photovaporization for the management of genital condylomatosis.

Clinical Case

It is a 47-year-old male patient, obese, by profession and trade State Police Officer; who consulted on 7/29/24 for presenting lesions at the level of genitals type condylomas with 3 months of evolution, and difficulty in retracting the foreskin, a sample was taken for biopsy, N# B-4493-2024, reported a histological diagnosis of condylomas acuminata

Treatment was started with photovaporization with CO₂ laser, which was performed 6 sessions with an interval of 3 weeks at an intensity of 6 watts continuously. Once the remission of the lesions was achieved, subcoronal circumcision was performed, to achieve a completely the aesthetics required by the patient.

DISCUSSION

The incidence of HPV infections is increasing. More than 105 types of human papillomavirus have been isolated (9); some of these are known to have potential malignancy. Not all of them produce condylomas acuminata, as they are also agents of common warts, plantar warts, and laryngeal papillomas. The differential diagnosis of the lesions mainly includes: molluscum contagiosum, pyoderma, seborrheic keratosis, lichen planus, and squamous cell carcinoma. There are references to the relationship between anal intraepithelial HPV infection and anal carcinoma(10, 11).

There are no known treatments that eradicate human papillomavirus from the skin. A viral genome has been shown in neighboring tissue even after laser treatment (12). Recurrences are common. Consequently, the goal of treatment is simply to remove exophytic warts and improve the signs and symptoms of the disease. In view of the high recurrence of these lesions, the use of new technologies that minimize recurrences and those generated by it is imperative (13).

Likewise, Alharbi, et al(14), report that the treatment of multiple genital warts with laser in 5 sessions was less “destructive to the surrounding tissue” and achieved good cure rates, concluding that it is an effective therapeutic option, which was demonstrated in the present study, obtaining a remission in the number of lesions that ranged between 38 and 100%, similar to the data found in this case.

In this sense, when evaluating the patients after the treatment applied with CO₂ Laser, improvement was evidenced with an evident decrease in the number and size of the lesions, without presenting significant complications, which can be contrasted with the results found with a study carried out in the city of Munich (Germany) during 2019, in 45 patients with condyloma acuminatus lesions in the region of the mons pubis, groin and thigh, which were treated in 7 sessions with CO₂ Laser, of continuous emission as well as Hernández Carlín and Garay Serrano,

conclude that laser ablation demonstrated in their study to be effective both for the healing of lesions, as well as for recurrence, persistence and complications (14)

According to Alharbi, et al(14), they suggest that other techniques should be used to achieve the desired aesthetic results such as phimosectomy, since men are about three times less likely to harbor HPV in the penis than uncircumcised men. Giving a protective effect for HPV infection enhanced laser therapy, similar to what was obtained in our case.

Conclusion

HPV infection is one of the most prevalent STIs, although it is not known exactly due to the existing epidemiological under-reporting. Over time, a variety of treatments have been developed, ranging from surgical to more recent therapies such as immunomodulators and photodynamic therapy. We have come a long way in search of a highly effective treatment to treat this pathology, but there is still a long way to go and evidently the solution is focused on treatments that have multiple approaches that manage to stop the development of these lesions and their permanent cure.

In view of the results, it can be concluded that condylomatous lesions in the genital region, produced by human papillomavirus infection, can be treated with CO₂ laser, evidencing that it is an effective treatment since it reduces the number of lesions effectively, and at the same time it is an outpatient procedure with a very short recovery period and few side effects.

ANEXOS



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5

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