$C0_2$ Laser Treatment of Female Genital Condyloma Acuminata

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KADINLARDA GENITAL CONDYLOMA ACUMINATADA C02 LASER TEDAVİSİ

Geliş Tarihi: 20 Ağustos 1988
Kabul Tarihi: 25 Şubat 1989

SUMMARY

Four and one-half years experience with C02 laser treatment of condyloma acuminata of the genitalia, perineum, anus and/or rectal mucosa of 160 females is discussed. Post operative discomfort was the complaint of the majority of the patients. Pyrexia occurred in five patients, and scar formation to a certain degree was observed in another five. Except for one patient with focal fusion of the labia majora, the degree of scarring was negligible. Within the first year, cure rates following first and second treatments were 82% and 96%, respectively. After three years following CÖ2 laser treatment all patients were free of condyloma acuminata. In one patient late recurrence occurred after four years. One patient with giant condyloma was subjected to vulvectomy following her second laser therapy which failed to prevent further recurrence.

Key Words: CÛ2 Laser, Condyloma accuminata.

T J Research Med Sci V:8, N:3,1990,287-290

ÖZET

Dört buçuk yılda genital perineal, anal ve/veya rektal mukozada condyloma acuminata tesbit edilen 160 kadın hastada C02 laser tedavi sonuçlan değerlendirildi. Hastaların büyük çoğunluğunda postoperatif dönemde lokal ağrı şikayeti mevcuttu. Beş vakada ateş, 5 vakada da skar formasyonu gözlendi. Bir vakada tedaviye bağlı olarak labium majusta fuzyon gelişti, ancak skar oluşumu minimaldi. Bir yıl sonunda birinci ve ikinci tedaviler sonucunda iyileşme yüzdeleri %82 ve %96 idi. Uç yıllık takipte tüm hastalarda condyloma lezyonlan kaybolmuştu. Bir vakada tedaviden 4 yıl sonra geç rekurrens gelişti. Dev condyloma lezyonu olan bir vakada ikinci laser tedavisininde başarısızlığı nedeni ile vulvektomi uygulandı.

Anahtar Kelimeler C02 Laser, Condyloma acuminata.

T Kİ Tıp Bil Araş Delgisi C8, S:3,1990,287-290

INTRODUCTION

The general consensus is that the etiologic agent responsible for condyloma acuminata is the human papillomavirus which consists of a hetoregentc group of human papillomaviruses that cause warts on the skin and/or mucous membranes of the respiratory, gastrointestinal and genital tracts. Epidemiologic surveys, human papillomavirus might be associated with the development of human squamous cell carcinoma in the genital tract. Malignant transformation depends on human papillomavirus type, synergistics effects between the virus and chemical or physical carcinogens, immune and genetic disposition (1).

Within the last decade the incidence of genital condyloma acuminata increased at an alarming rate. From 1966 to 1978 the number of consultations for condyloma acuminata increased 398% for males and 684% for females (2). Caustic agents such as trichloroacetic acid and podophyllin, chemotherapy with Bleomycin, 5-fluorouracil, surgical excision including vulvectomy, cryosurgery,

cautery, immunotherapy in vaccine for or dinitrochlorobenzene as a sensitizing agent have been or are currently being used with limited success (1,3,4). Since the late 1970's interferon therapy has been under investigation (1). Various investigators reported a success rate of over 90% with carbon dioxide (CO_2) laser treatment of condyloma acuminata of the lower genitalia (5-8).

fn this study our 4 1/2 year experience with CO_2 laser treatment of 160 women with condyloma acuminata of the lower genitalia is discussed.

MATERIALS AND METHODS

A total of 160 females with condyloma acuminata of the genitalia, perineum, anus and/or rectal mucosa were treated with CO_2 laser in the State University of New York at Buffalo affiliated hospitals from July 1979 to July 1984. A Cavitron Model AO 33 CO_2 laser system attached to a Carl Zeiss OPML-1 eolposcope was used, achieving 2 to 3 mm. therapeutic depth with 800 to 1000 Watt/cm" power density. During the treatment of extensive condylomatous lesions multiple CO_2 laser cxcisional biopsies were done to role out underlying invasive and/or preinvasive neoplasia.

Forty-two patients had general, 100 had local and one had spinal anesthesia. No anesthesia was required in the treatment of 16 patients with flat condyloma acuminata of the cervix and one with condyloma acuminata of the vagina.

fn 95 patients condyloma acuminata was primary. Of 65 previously treated patients, 53 had podophyllin application, 4 had cryotherapy, and 8 had both.

Age distribution was 13 to 55 years and all were sexully active. Ninety-two were in their 20's and 30 were in their teens.

Ninety-eight patients had colposcopic evaluations. Initially, colposcopic examination was spared for condylomatous patients with abnormal Pap smear. Later in the study colposcopic examination became part of the pre-laser treatment evaluation.

Eight patients were pregnant. One patient in here first trimester elected termination of her pregnancy with suction curettage at the time of her CO_2 laser treatment of the vulva, vagina and perisacral area. The remaining seven were in their second and third trimesters. In two only the cervix, and in five the cervix, vagina and vulva were treated.

Four patients were diabetic. Three had juvenile and one had class F diabetes.

Evaluations of male sexual partners were performed, by their urologists, without the help of the eolposcope. Should they have had visible condyloma of their genitalia they were subjected to conventional therapy with podophyllin application, cryotherapy or cauterization. Males without evidence of condylomatous lesions were advised to use condoms during intercourse for a period of six months following CO_2 laser treatment of their female sexual partners.

FINDINGS AND RESULTS

Of 144 patients with condylomatous lesions of the vulva, vagina and perineum, 30 had colpohistologic evidence of condyloma acuminata of the cervix.

Sixteen patients had only colposcopically detectable condyloma acuminata: 14 in the cervix, one in the vagina and one in the vulva.

Of 98 patients subjected to colposcopic examination, 20 had associated cervical intrapilhelial neoplasia; 9 CIN I, 9 CIN II, 2 CIN III. Two patients had mild dysplasia of the vulva.

Thirty patients (18%) had persistence and/or recurrence within six months of therapy. Twenty-three with small recurrences responded to repeat therapy. In seven where recurrence and/or persistence was extensive only two responded. Of five failures following second CO_2 laser therapy, one had giant condyloma and was subjected to vulcevtomy in another institution which failed to prevent further recurrence, and four had a third laser therapy with complete response. One had recurrence in her fourth year and is presently under follow-up.

Of five patients who developed scarring, four did not have major cosmetic or functional disability. Scar formation was negligible and exclusively confined to the peripheral vulva and/or perineum and hyperpigmented. The fifth patient, a 15-ycar old juvenile diabetic, had fusion of both labia majora preceding her second therapy which

Figure 1. Gaint Condyloma

Figure 2. Gaint Condyloma after laser treatment.

was deliberately not completed for purposes of protecting clitoris which was completely replaced by extensive condyloma acuminata (Figure 1). Fusion was easily detached with the CO2 beam during her third therapy.

Five patients with extensive condyloma acuminata had temperature elevations (pyrexia) of 101°F. and above within 24 hours of therapy. In two, who required a total of three treatments, pyrexia occurred before the first and second but not the third treatment. Two patients with pyrexia were diabetic. A11 five received intravenous antibiotics until their blood cultures were eventually reported as negative. In none of them did the pyrexia last over 36 hours.

DISCUSSION

Following CO2 laser treatment of the genital condyloma acuminata, Bellina (8) described persistence as appearance of (he condition within six months and recurrence over that period. In his eight year follow-up of 242 women with condyloma, 14% had to be retreated. A11 patients had at least one and 65% had at least two years of disease free interval following treatment. Once the male partner was treated and the female partner retreated the effective cure rate was 97%.

Baggish (5) in 3.5 years experience with 110 women had 5.5% (7 patients) with recurrence. Four recurrences occurred in 38 patients who were staged for more than one treatment for their extensive lesions. Calkins reported a 91% overall success rate in 49 women subjected to CC)2 laser (7).

In our study the cure rate with initial therapy was 82%. Following a second therapy, which occurred within six months to one year the cure rate increased to 96%. Excluding one severely immunosuppressive patient who had vulvectomy, the remaining 4% of the patients all responded to a third therapy. One of those patients was the only late recurrence of the patients all responded to a third therapy. One o those patients was the only late recurrence of all treated patients at the end of the fourth year.

C02 laser treatment of the genitalia is not completely free of complications. Development of pyrexia in five patients is an interesting phenomonen which needs further investigation. Bellina (8) discussed the possibility of an allergic response to protein absorption and achieved prompt normalization of temperature with intravenous prednisone and recommended intraoperative administraiton of glucocorticoids as a preventive measure.

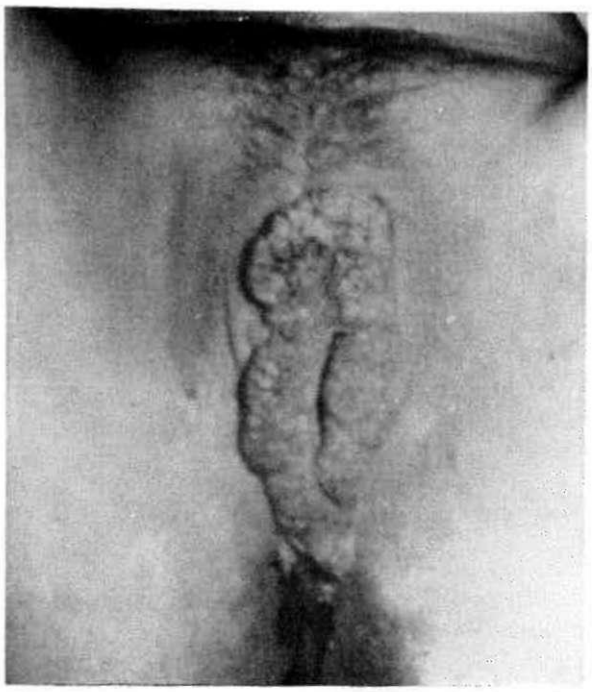

Figure 3. Gaint condyloma.

Scarring could occur, and in one patient it caused fusion of the labia majoras which was corrected with C02 laser without any difficulty. In four patients scarring was negligible and susceptibility of peripheral skin to the scarring rather than the vulva itself could have been attributed to the differences in blood supply.

One of the common, and to a different degree most disturbing, complication of C02 laser therapy is the post operative discomfort following the treatment of the skin and/or mucosa beyond the hymenal ring.

Since human papillomavirus lesions have been shown to be associated with cervical, vulvar intraepithelial neoplasia and occasionally invasive squamous cell carcinoma, their vigorous and effective treatment is important. In extensive and disseminated condylomatous lesions of the genitalia, perineum and/or anus and rectal mucosa C02 laser therapy in one or two staged applications at the least, has practical and technical advantage over cryosurgery, cautery or surgical therapeutic modalities. In C02 laser treatment of overall genital condylomatous lesions, with varying sizes and locations, although persistence and/or recurrence is relatively common within six months of initial application, with repeat therapy the one to four and one-half year follow-up results are encouraging.

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